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To Improve the Soil and the Mind.

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False and Genuine Teachings of Science.

Tis well known that for many years past, and indeed at its commencement, the *Cultivator* adopted "Science with Practice" as its motto, and the same guiding principle has been maintained by the Country Gentleman, during the short period of its existence. Actual experiment has been assumed as the great and only test of the accuracy of all theoretical propositions. The real value of any proposed mode of culture, can be fully known only as its results are determined in actual practice. A chemist, for example, compounds a new manure from theoretical reasoning, which he is confident will exceed all other manures; but after actual and repeated trial, it proves a perfect failure. Now, which is to be the standard for determining its efficacy, the theory, or the practice? Can scientific reasoning satisfy even a *scientific* farmer, that this artificial manure exerts a highly fertilizing influence on his wheat-field, when actual trial and accurate measurement directly contradict such reasoning, and show that the difference of a single bushel per acre is never made by its application? Every man, learned and unlearned, professor and ditch-digger, will say unhesitatingly that the experiment itself, the amount of the crop yielded, is the *final test*.

Let no one answer that this is not an admissible instance, for the fact is well known that a case not unlike this really occurred in Europe but a few years since, under the direction of the most eminent physiological chemist of the day. It is true, that after learning much since that occurrence, through the teachings of practical cultivation, scientific men can now point out the theoretical fallacy in making the compound; but this is only an additional proof of the correctness of the position we have always maintained, that science must be *combined* with *practice* if we would reap its full benefit, and be able to apply its theories correctly.

There are interesting cases where some of the truths of science have been brought to bear in practice, by previous calculation, with the unerring precision of mathematics; and this is more especially true with mechanical philosophy. The architect or engineer determines beforehand the form of his structure best fitted to resist the greatest pressure; or he may determine the precise thickness of his wooden beams or iron shafts, to

render his building or bridge safe from the danger of rupture and falling, without first trying the experiment of allowing his costly edifice to tumble down, till he sees what its parts will bear. So also in the application of chemistry to the mixing of medicines, to bleaching, and in many manufactures, where single combinations take place, and where all the minerals are entirely at the operator's control, he may know in advance just what to expect. But in the growth of plants, where the relations between the numerous chemical substances in the soil, and the many proximate elements of vegetables, are incomparably more intricate; where the combinations, instead of being rapidly formed right under the eye of the chemist, are the imperceptible work of whole months, and in so dark and concealed a manner that the keenest microscope can detect nothing of them; and where, in addition to all this, these very complex and minute processes are greatly influenced and sometimes even arrested by the external action of moisture and other causes in the changes of the weather, the investigation of soils becomes one of extreme difficulty and most commonly of much uncertainty. It is no wonder then that eminent chemists are at this day disputing on the operation of some of the most common mineral manures.

It must be obvious, therefore, that to obtain much practical benefit from the *analysis of soils*, everything must be thoroughly established by long, accurate, and repeated experiment. Yet, superadded to all the difficulties just mentioned, is still another of a most serious character,—the extreme minuteness of proportion of some important constituents. For example, phosphate of lime is known to be of great and essential importance to the wheat crop; yet so imperfect are the means for its detection in soil where but a ten-thousandth exists, that an eminent analyst did not even discover a *trace* in the most fertile wheat soil of America, by ordinary means. Again, the addition of a hundred thousandth part of sulphate of lime to the soil, has, in more cases than one, doubled the clover crop; and other ingredients in like proportion have produced striking effects; yet what chemist in an ordinary analysis, merely for a farmer's common practice, would be likely to point out the presence and quantity of these important but hidden substances, so that he might shape his management with confidence accordingly? What-

ever future skill may develop, it would be folly to recommend such analysis as an infallible guide at the present day.

And yet we are told in a late number of an American periodical, of high pretensions to scientific infallibility, (the "*Working Farmer*,") in some two columns of argument or assertion, that the analysis of soils is a reliable guide, "within the reach of every intelligent farmer," and that in no instance can be found the failure of "well ascertained chemical knowledge," in this particular.

Independently of the extreme difficulty of procuring minute and reliable analyses for ordinary farming, and throwing out of the question that the greatest chemists are now disputing about the utility and action of some of the ingredients of the soil, rendering it certainly very difficult for common farmers to decide when doctors disagree,—independently of all these difficulties, there are many other controlling causes which may operate, requiring a great deal of caution at least, in recommending these things for general adoption. We have been assured, for instance, by a thorough scientific and practical farmer, that he has found by thoroughly *grinding* his stable manure to *powder*, when applied to his clay soil, and then thoroughly *grinding it into the soil*, he gets about five times as much benefit from it, as by its ordinary application. So, likewise, it has been found that some of the most fertile western soils in the United States, were composed essentially, so far as analysis could discover, of the same ingredients and in the same proportion, as some quite sterile soils in Massachusetts—the only difference being in the extreme fineness of pulverization possessed by the particles of the former. Again, the degree of moisture has a most important influence in addition to all the preceding causes, as is shown by the fact that some soils which for a time have produced almost nothing valuable, when thoroughly underdrained, have become eminently productive. These, and other similar reasons, are sufficient to suggest an explanation of the fact recently stated in this paper by JOHN JOHNSTON, a very intelligent and skillful farmer, that a wheat soil on his farm, of extraordinary fertility, was pronounced *sterile* by a distinguished chemist who analysed it.

Now, no one will infer that we oppose the application of chemistry to farming in any particular, even in the analysis of soils; but that we urge its application in the only way in which it promises substantial benefit, and more especially in such a way as to prevent the failure, disappointment, and disgust, which must inevitably result from the false and superficial teachings we have just pointed out. The detection of counterfeit notes can be no injury to the genuine bank; the true interests of science are advanced by stripping delusive pretensions of their counterfeit colors.

The hasty and superficial way in which opinions are adopted, by first seeing a little, and then presuming a great deal, and finally jumping to the conclusion, has long been detrimental to the progress of agriculture. J. J. MAPES says, in his *Working Farmer*, in speaking of the benefit of the analysis of soils, "we assert without

the fear of honest refutation, that after an experiment of some years, and a practice on many hundred farms, we know of no exception," &c.—yet he nowhere gives us the results of those analyses in connection with the kind and quantity of the fertilizers, and the amount of crops before and after the treatment. Such reports would be of some real value—they would furnish the details of PRACTICE in connection with the suggestions of SCIENCE. We have had too much of indefinite assertion—and merely saying that certain processes have proved beneficial, without showing the amount, or without informing the public at all whether the whole supposed increase was not entirely from guess work, furnishing nothing satisfactory to those accustomed to form opinions from the demonstration of facts.

There are, however, many ways in which scientific knowledge may be applied with considerable certainty in agriculture. Among these we may name the application of mechanical principles in the construction of farm implements and machines; of hydraulics, in irrigation, draining, &c.; besides the numberless cases which are constantly occurring in daily practice, where most valuable assistance may be rendered. Great benefit has already been received from the analysis of manures, where fertilizing constituents are in a concentrated form, and useful suggestions are obtained from the analysis of plants. Science has rendered a most important service, by explaining and enforcing the reason of some of the best modern practices, previously established by experience. Rotation, subsoiling, underdraining, and most of the operations of modern improved agriculture, are indebted for their existence to the teachings of experience; but science has since thrown its light upon them, and shown the reason of their value. And as a *sug-gester and guiding light*, it will be looked to in all coming time as a valuable auxiliary; but the chemist who shall undertake to sit in his laboratory, and without practice to direct the labors of the field, is like the man who would attempt to run a locomotive on a single rail—he only shows that he has not yet crossed the threshold to true agricultural science.

Starving in the Midst of Plenty.

The man who should starve himself with a thousand bushels of wheat in his granary, or with a hundred barrels of potatoes in his cellar, because he knew not how to cook or convert them to food, would not commit a greater act of folly than some of our land-owners, who possess vast means of fertilizing their fields, which they never apply. We have been struck with the pointed remark of L. CLIFT, in his address before the Windham County Ag. Soc, that "*most men own a second farm, beneath their present surface, which has never been disturbed by the plow.*" We once knew a wealthy man, who had a fine farm in one of the best counties of Western New-York, and which he had cultivated on a bad system for many years, until some of the finest fields were reputed to be nearly worn out, and yielded poor or at best very uncertain crops. His land had usually been plowed about four inches deep, but occa-

sionally "subsoiled," as the owner termed it, to six inches. A part of it fell into new hands, and it was immediately turned over to a depth of eleven to twelve inches by means of three yoke of oxen attached to a Michigan or double mould-board plow. An entirely new material was turned up to the light of day, consisting in part of the fertilizing calcareous subsoil, and in part of rotten leaves, decayed roots and black mold, which had never been reached before, presenting all the appearances of newly cleared land, and giving immediately a heavy growth in crops. In a neighboring county, an extensive and intelligent farmer assured us, that so great was the fertility of his subsoil that he would regard it as a favor could he have six inches of the upper soil completely carried off from his lands. Yet he never plows more than half a foot in depth, and does not subsoil or trench-plow, because he "cannot afford it." In some of the interior portions of the state, the soil is a light sand, which suffers drouth and sterility from a want of clay and marl. Now it happens that a large portion of this light and thin soil is underlaid at a depth of a foot or two with a strong calcareous loam, which might, at a very moderate expense, be thrown up from pits and spread in large quantities over the surface; and in some places it may be reached even by subsoiling and trench-plowing. One farmer accidentally discovered this subterranean bed of fertility, by spreading broadcast from a ditch for a few yards on each side, the earth taken from the digging. In an unfavorable season, when the rest of the field produced only four bushels of wheat per acre, the land adjoining the ditch, which had been dressed with the subsoil, yielded at the rate of twenty bushels per acre. Yet, to this day, the owner of the farm suffers this fertilizing subsoil to remain untouched and unreached. In other instances, there are extensive beds of peat and of marl, lying just as they have done for centuries, with the adjacent uplands starving for their beneficial influence, which, if not as great as that of yard manure, is at least much more permanent.

A late English agricultural journal, gives a few examples of great benefit derived from using the material of the subsoil:—

We have in our mind's eye at this moment a case where a farm of moory land, but not high-lying, was purchased, including an excellent house, for about fifteen pounds per acre. The soil was a white, gritty sand, full of land springs; the surface had once been peat, but the poverty of the tenantry had induced them to pare off the peat from a great part of it, and thus it was left barren white sand to the top. Furze and rushes, with a little heath, was almost the entire produce of the land. The owner drained, at a cost of about three pounds ten shillings per acre, and clayed the whole, by digging ponds, at the rate of 200 loads per acre, or about five pounds more, and then sowed turnips and seeds, followed by wheat. The result was most successful, and the farm is now in good cultivation, and let, we should say, for 20s. per acre. We do not happen to know the exact rental, but it strikes us as being the probable amount. But more; the fences had been planted and died. The owner immediately renewed them by re-planting, manuring the quicksets with clay. They grew amazingly, and are now remarkably healthy and good fences.

Mr. Gould's experience with sixty acres of light

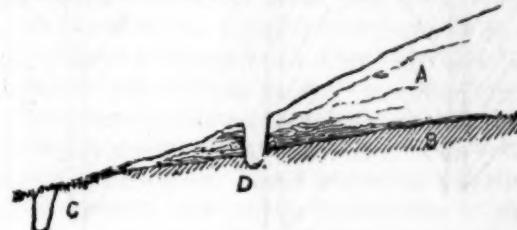
moorland, as detailed in the *Transactions of the Bath and West of England Agricultural Society*, bear strongly upon the point. He took the waste on a lease, pared and burned, and, in sinking a well, happened to take out some clay, which he carted into his eleven acre enclosure. The result was that his subsequent crop of oats showed a produce of 50 bushels per acre, and his unclayed not more than 30 bushels. The subsequent grass or clover on the clayed part was excellent, while not a plant grew on the unclayed. He then clayed the whole of the 60 acres at intervals, and in 16 years had applied 80 loads per acre—twice, forty—and the result has been most satisfactory in the whole, being rendered capable of growing good crops of corn, turnips, and grass, and is carried on in the four-course system.

It is not every subsoil, we readily admit, that possesses the remarkable qualities of those which have been mentioned, and no one should think of rushing blindly into an extensive experiment, before he has tested its probable value on a small scale. It should not, however, be forgotten, that many subsoils which at first present every appearance of sterility, are often so improved by exposure to the air, by pulverization, and by mixture with the surface mold, as ultimately to become very productive.

Position of Side-hill Drains.

An erroneous opinion has prevailed in relation to the position of parallel drains on hill sides, the practice being common in some places of laying the channels sideways with the hill, with but little fall or current, instead of putting them directly up-hill so as to give a rapid descent.

There are some instances in which a drain cut sideways will prove of great value. If, for example, a porous or gravelly hill (A, fig. 1,) rest on a water-tight hard-pan surface, (B,) the rain which falls upon the hill will immediately pass through the soil till it



(Fig. 1.)

reaches the hard-pan, over which it will flow until it "crops out" at the surface and forms the marsh or wet ground at C. A ditch cut at D, parallel with the foot of the hill, and having a slight descent, will cut off these under-ground channels in a more efficient manner than could be done in any other way.

But it more commonly happens, in modern tile-draining, that a large, moderately sloping, and nearly uniform surface, is to be relieved of its surplus water, a large portion of which descends directly from the clouds, and another portion flows down from higher land through the plowed soil, resting at a nearly uniform depth upon a harder and more impervious subsoil, (fig. 2.) Now, if the drains are located sideways with the hill, the descent will be so small that the water will not flow off freely, but will fill a considerable portion of the ditch, and consequently a large part, instead



(Fig. 2.)

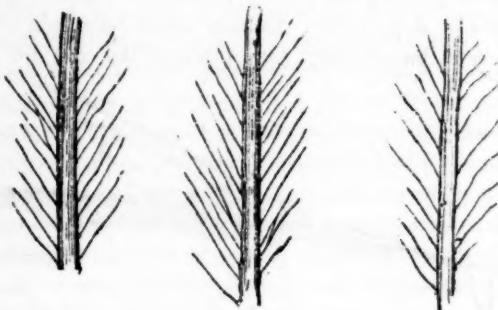
of flowing in the channel intended for it, will take the shortest cut of escaping through every crevice of the soil directly down the hill, thus actually irrigating or filling with water the soil immediately below the ditch, (fig. 3.) This will be undoubtedly the case if the soil and



(Fig. 3.)

subsoil be in any degree of a porous nature, and the only exception occurs where the hard-pan beneath is perfectly water-tight, as in the case exhibited by fig. 1.

Modern experience has therefore proved the method of laying the drains directly up hill, in all ordinary cases, as decidedly the best. The water having a rapid descent, will be immediately carried off thoroughly and completely; much smaller tiles will accomplish the same purpose, and no water, after it has passed into the drain, can possibly enter the soil again below. Hence in draining a swale, or any portion of land lying between ridges, a single main ditch should be first cut along the bottom or lowest part, and the parallel secondary drains should then be so laid as to enter it



(Fig. 4.)

nearly at right angles. Fig. 4 represents the course which the minute streams of water take through the soil while flowing towards these parallel drains, the descent for these streams being nearly as steep and rapid as if they flowed into horizontal drains, cut along the hill-sides, at the same time that the direct drains possess none of the disadvantages of those cut in a horizontal direction.

Oat Bread.

The celebrated Dr. Johnson was once asked for a definition of the word "oats," when he replied, by intending a slur upon the object of his prejudice, Scotland,—"It is a grain on which *horses* are fed in England, and *men* in Scotland!" A Scotchman present proved quite a match for the Doctor by instantly replying,

"And where will you find such *horses* and such *men*?"—the English horses, even at that day, standing pre-eminent for excellence.

It appears that Dr. Johnson's own countrymen are just beginning to inquire into improved modes for manufacturing this same Scotch bread, in a form suited for genteel people, chemists having discovered that the farina of the oat supplies more nourishment of the muscles, bone, and blood of man, than any other vegetable substance. The London Farmer's Magazine states that a new process has been adopted for preparing flour from oats, as white as that from wheat. It is secured by patent, and consists essentially of first kiln-drying the grain, then separating the husk, and afterwards grinding it into flour. Experiments appear as yet to be too limited to judge of its value for general use, but it is said that specimens already prepared may be used for gruel, for the preparation of arrow-root, puddings of the lightest and finest quality, pancakes, tapioca, &c., and one experimenter states that "for puddings it is much superior to arrow-root, sago, and all such farinas." The correspondent of the Farmer's Magazine informs us that specimens of this flour, "were received on May 12, and the following day, a pudding, according to the given direction, was made with *two table-spoonfuls* of the flour. It was sufficient for five persons—thus proving the fact of a small quantity being requisite for the purpose."

Could not some of our smart countrymen—of corn-starch and meat-biscuit invention,—take hold of this oat-flour business, and make something out of it?

Cattle Gnawing Bones.

MR. EDITOR—I wish to inquire if you, or any of your numerous subscribers, can tell me why it is that my cows and other cattle have a liking to chew old bones that they find in the fields, that they will stand for hours and chew them; they will even leave their salt many times for this purpose. Please answer through the Cultivator. VIXEN. May Flower, April, 1853.

We can give no other reason than the appetite they acquire for some peculiar flavor possessed by the bones, or by the small remaining portions of muscle and gelatine which remains upon them. Animals sometimes show nearly as strong an appetite for certain substances, as some men do for tobacco. It has been said that the practice of chewing bones, arises from a natural instinct for phosphate of lime in such animals as do not get a sufficiency of this ingredient in their food, especially in those which are confined to old pastures which have exhausted the soil of its phosphate. This strikes us as exceedingly improbable, for to say nothing about the extraordinary analytical discrimination which this would evince, throwing in the back-ground the most delicate tests of the longest-headed professors, it so happens that the animal's teeth usually make no impression whatever upon the hard bone, and only get small portions of the more soluble gelatine, &c. To test this matter, observe whether cows will continue their liking for bones, after small portions of bone-dust or dissolved bones have been mixed regularly with their food. We have known some animals, and colts more espe-

sially, to have an extraordinary propensity to chew leather, yet we never could discover that such animals possessed any idiosyncrasy, but merely a depraved appetite. Some horses have a strange propensity to gnaw wood whenever they can lay their teeth upon it, without any particular object or reason.

Drouth, Irrigation, and Liquid Manuring.

The recent extraordinary drouth, which prevailed in a large portion of the country, very naturally leads to the inquiry for remedies to prevent the disasters usually incident to such occurrences. When it is remembered that about 90 per cent of all growing crops, are, on an average, simply water, it will be no matter of surprise that vegetable growth should be either entirely suspended or else greatly retarded, and that in some instances even the death of smaller crops should occur, when the supply of this very important element is entirely cut off. Not only is the supply withheld, but all the riches of the soil are as effectually locked up as in a case of iron, for there is nothing to dissolve its fertilizing portions, and to convey them to the vessels of the plant. Dr. Hales found that during a dry season a bunch of green grass placed under a bell glass, perspired so rapidly as to cause in two minutes the condensed moisture to run down its sides. No wonder then, that meadows and pastures, which in order to flourish, must continue to throw off moisture thus rapidly, now that they can get nothing to supply the demand, should look as parched and suffering as a caravan of pilgrims in the center of an African desert.

As for remedies, the first and great leading one, applicable to all localities, is *deepening the soil*. This operates beneficially in two ways; first, by permitting greater strength and vigor to the plants, so that they are not easily affected by changes from wet to dry; and secondly, by making the *reservoir* of water—the *sponge*—which is to receive and retain the showers when they fall, deeper and consequently more capacious, so as not to be easily exhausted by seasons of drouth. A soil only four inches deep, with a hard-pan bottom, must soon have its moisture dissipated when the sun's rays pour down upon it day after day for a month, or when the plants which cover its surface are continually for that period pumping the water out of its shallow bed and sending it off through the leaves in the form of insensible vapor into the air. But where the soil has been made deep by trench and subsoil plowing, a much longer time is required to exhaust this deeper reservoir of its water which the plants obtain by means of the long roots they send down, or by the capillary absorption of the upper portions from the moister stratum below, and which process a mellow soil always greatly facilitates. This remedy, of course, cannot be applied *now*, but is only a part of a general system of improved farming.

Other remedies, less universal in their application, but of great efficiency, where applicable, are irrigation, in its strict meaning, and liquid manuring. It is only in some particular localities that water is at command, which may be conveyed by channels upon the land; and to gardens and limited spaces, it may be applied

to great advantage. European gardeners, in a much moister climate than ours, find extraordinary advantages from a constant application of water in large quantities, and there have been a few examples here where the admission of water between the rows of potatoes, and other garden crops, has produced surprising results.

Liquid manuring appears to be more particularly applicable to the neighborhood of towns and cities. Millions of dollars are annually wasted by the large quantities of enriching substances which are annually carried off and wasted in sewers. It has been computed that the city of London affords enough in this way to impart the highest degree of fertility to three hundred thousand acres of land; and at the same rate of calculation New York would fertilize nearly a hundred thousand acres. The most surprising effects have lately been obtained from liquid manure in England, far exceeding those from any other enriching application. The reason is obvious—the manure is not only reduced to the *finest degree of division*, but the water which holds it carries it through all parts of a porous soil, and forms a more perfect intermixture than could be effected by any other means; at the same time that the water performs another most important office, namely, supplying the growing plant with the amount of moisture which it so largely needs.

There is no question that a highly diluted mixture of water and manure is the most perfect state in which to apply it; and in the case of sewage water, this mixture being already made, it can be applied in no other way. The question immediately arises, how is it to be conveyed to the land in the most economical manner? This is the most difficult part of the process, for it is far cheaper to cart a ton of solid manure, than the same amount of fertilizing materials with ten times their weight of water. A very important discussion lately took place on this subject in a meeting of the Agricultural Society of England, in which it was declared by those versed in hydraulics, and who had experience in the conveyance of water in pipes, that so great was the facility with which it might be conveyed in pipes by the agency of steam power, when compared with carting by horse labor, that the former could be effected at less than one-tenth the cost of the latter. One great difficulty, however, occurred from the fact that the liquid manure was most wanted on the dryer hills, which are least accessible, the towns being usually lower than the surrounding country; but this difficulty had been obviated by pumping up with a steam engine. Several distinguished and successful farmers had procured hydraulic apparatus for this purpose; one had placed a hydrant for every 40 acres of his land, another for every 11 acres, and another for every $3\frac{1}{2}$ acres; from these hydrants a hose pipe issued, and was carried round in a circle, watering the whole surface regularly. Among these farmers was J. J. MECHI, well known by reputation to the farmers in this country, who, from a large tank, drove the liquid manure through pipes over his whole farm, employing for this purpose the farm engine, erected for his mill and thrashing machine.

The London Times furnishes the following account of the extraordinary success which has attended an experiment of this kind, and which must undoubtedly be attributed largely to this simple supply of water, as well as to the fertilizing influence of the manure. The statement of keeping fifty sheep per acre—almost ten times as many as our farmers think of pasturing—would draw rather hard on our credulity, were it not otherwise corroborated, and had we not already some extraordinary facts at hand of the enormous growth resulting from similar treatment:

"At Myremill, in Ayrshire, Mr. Kennedy feeds under cover in the summer months 220 large oxen, 460 sheep, 20 horses, and 150 store pigs, on 90 acres of Italian rye grass. Last summer his house-fed sheep fattened better than in the field, and were kept on Italian rye grass for four months, at the rate of 56 head per acre! They likewise received a daily supply of steamed food. But allowing for this, we find that on this farm each acre of grass keeps about four times as much live stock as the average of the cultivated land of similar quality in England. Mr. Kennedy has attained his high state of fertility by the use of liquid manure distributed over the farm in pipes, and applied to the surface by the force of steam in a jet-like shower of rain. To use Mr. Mech's graphic words, he can "increase his wet days" as he finds it necessary, and when other people's fields are parched with drouth, his are glistening with perennial verdure. Having an unfailing supply of water, he can either mix in his manure tank with a more enriching substance, and so shower it over the land, or he can sow guano broadcast over the grass, and then wash it in dissolved, or if nothing but moisture is needed he applies that only. No doubt such an apparatus requires a large stock both of capital and skill—the one to start it, and the other to conduct it. A most important experiment it is, however, and likely to lead to great results ere long."

This subject is yet in the infancy of its successful application,—a stage which every useful operation must first pass through before it can reach maturity. To what extent in practice it may yet reach, is hard to predict; but it would certainly be well worthy the efforts of enterprising men in and near cities, to provide tanks for the reception of the immense amount of wasted wealth in the form of sewage water, and pipes for its conveyance to the large plantations occupied as market gardens, where it is believed all judicious outlays would soon repay large dividends, in the fine and luxuriant growth they would soon occasion.

Root Crops.

A correspondent of Juniata co., Pa., inquires "the best time to sow carrots and ruta bagas; whether they are transplanted from a bed—and the time for gathering the crop."

Carrots should be sown as early as Indian corn is planted, or even sooner; if later, the crop is apt to come up unevenly from drouth. Ruta bagas should be sown early in summer. Both should be sown in drills where they are to remain, with a drill machine. If no drill machine can be had, drills must be made with a hoe, and the seed dropped from a tin cup, nailed to the lower end of a stick as long as a cane, and a hole made in the bottom just large enough to let out a supply of seed into the drill, as the operator walks along it, and shakes the cup near the ground, by means of the stick.

On heavy soils, an inch is quite deep enough to cover them; on light soils the depth may be one and a half inches or more. *The great secret of success*, is to have *very rich ground*, that has had *all the seeds of weeds completely worked out* by clean previous cultivation; and by destroying all weeds that may appear, when this has not been attended to, *before they are an inch high*. It is useless and very expensive to contend with large weeds. The crops should be harvested so early as to be just safe from all danger of injury by the freezing of the soil. A very slight crusting of the surface will not affect them; but an inch of frozen ground is very hurtful, particularly to ruta bagas.

A novice in raising crops of the ruta baga, may be known by his leaving the plants so closely together that their size is not half developed. The drills should be two feet or more asunder, and the roots not nearer than ten inches in the drill; if the soil is very rich, not nearer than fifteen inches. Carrots may be more than twice as near together. —

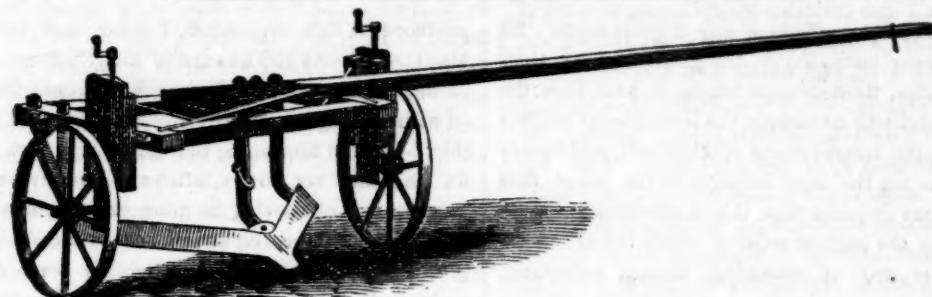
Value of Manure from Cattle.

MESSRS. EDs.—What is the estimated value of manure, liquid and solid, dropped by a cow during the ordinary period of stabling? Also, what proportion of the value thereof may be safely reckoned as lost when the manure is thrown out into the barn-yard and exposed to the weather. A SUBSCRIBER. Tarrytown, N. Y. July 24, 1853.

The liquid portions of the manure from cattle are greater in bulk, and richer in quality, than the same from horses. The real money value of such manure must of course vary greatly with circumstances, such as the price of the crop raised, and the manner of applying the manure. For example, a ton of manure converted into strawberries, selling at four dollars per bushel, would return more money than a ton converted into corn at fifty cents, or ruta bagas at ten cents per bushel. Again—manure carelessly applied and badly mixed with the soil, will not yield one-third the return afforded from finely pulverised and thoroughly intermixed materials. Still further—the quantity and richness of manure is much controlled by the age, nature, size, condition, treatment and food of the animal which yields it.

In Flanders, where manures are well applied, and animals well fed, the urine of a single cow is reckoned at an average of \$10 per annum—the solid parts are estimated at one-half to three-fourths of this sum. Taking the usual price of guano, \$50 per ton, as the standard, the manure from a single cow, saved in the best manner, would be worth about \$20. This is, however, higher than manure is usually sold, and by the common management more than half is lost.

No accurate estimate can, however, be made of the loss, when it is thrown into the barn-yard, and exposed to the weather, without knowing other particulars. As most farmers manage, by providing straw enough to absorb about one-fourth of the urine, from one-half to two-thirds are lost; a larger quantity of straw, in connection with leaves, peat, and an occasional layer of turf, the latter being the most valuable of all as an absorbent, would save nearly the whole, even if exposed to the weather.



BOUGHTON'S THISTLE DIGGER AND SUBSOIL CULTIVATOR.

Boughton's Cultivator and Thistle-Digger.

This implement, represented above, is of recent invention, and so far as we know, has been introduced as yet only to a limited extent, in western New York. Its efficiency as we have witnessed, and the favor with which it has been received, have induced us to give the above cut, from which its mode of operation may be easily understood. The cutting part consists simply of a sharp cast-iron blade in the form of a wedge, and when fitted for operation the blade is lowered by means of the screws over the wheels, (shown in the figure) so that it may run a few inches below the surface of the soil. It cuts, at each passing, a strip of soil four feet wide, three horses being usually required for its draught. Five acres may be easily worked with it in a day. There is no difficulty whatever, in using it on moderately mellow ground, or on any land that has been once plowed the same season.

It operates in two ways—by pulverizing the soil, which it will do at any required depth by turning the screws; and by cutting off completely all thistles, grass, and other weeds, with which the land may be infested. On stony ground, where the stones are not too large for a plow to move, it operates with great effect, cutting off and killing all herbage which in such soils is apt to escape the plow and harrow. As a destroyer of Canada thistles, nothing is equal to it—the thickest patch may be completely exterminated in a single season, and for this purpose it is greatly superior to the plow, which is not only much slower, but does not always accomplish the object on light and gravelly soils. Since the practice of plowing but once for wheat, and using the two-horse wheel-cultivator, has come so extensively into use, it is likely to prove of great value in the preparation of the soil, and it is already highly esteemed for this purpose, more particularly by those who have used the wheel-cultivator. It is made by E. BOUGHTON, of Pittsford, N. Y. The price is \$30.

COST OF LABOR.—It is estimated that in consequence of the greater cheapness of agricultural labor in England, when compared to that in America, there is an aggregate difference against the American farmer, in favor of the English, equal to fifty million pounds, or two hundred and fifty million dollars, annually. Or, taking another view of the subject,—American farm laborers get annually for their work, two hundred and fifty million dollars more than they would get for the same amount of labor in England—a large aggregate sum to be put into poor men's pockets.

Farming in Western Pennsylvania.

MESSRS. EDITORS—Believing that good results may follow from farmers becoming acquainted with the modes and results of farming in various sections, I propose giving a synopsis of the state of agriculture in the southwestern section of this state. We compliment ourselves with the belief that in no section of the Union is farming prosecuted with more skill and success than in this region, with the saving clause, that it might be greatly improved. Our soil is various, though the clay and limestone so greatly preponderate that it may be called a limestone clay—of the tertiary formation, the stratification rocks and layers of earth perfectly horizontal. The face of the country is rolling, and the hillsides slope so gradually that nearly the entire surface is capable of cultivation. In consequence of the tenacious nature of the soil, it is but little liable to be washed off by the rains unless under very peculiar circumstances; consequently the sides and tops of the hills are quite as rich and productive as the bottoms or intervals, and the manures, animal and mineral, are preserved for the benefit of crops instead of being absorbed by an open, hungry subsoil.

The rotation of crops is very nearly uniform, viz, the sod or grass land is unusually broken up during the winter, for corn, which is succeeded by oats, or as is most usual is cut off in time for wheat in the fall. Usually it is succeeded by a second crop of wheat in order to get the soil into good condition for grass seeds, timothy seed being sown in the fall and clover in the spring as early as possible. The period of keeping it in grass varies; many farmers believing that grass is more profitable in the final result than grain-growing, permit their fields to lie in grass as long as it yields a fair amount of herbage. In the other case, where only a very small amount of stock is kept, it lies in grass only one year in four, this quality of the soil being kept up by heavy applications of manure and lime. On the whole the mixed system is adopted, combining the raising and grazing of stock with grain-growing. In many sections a large amount of clover seed is grown for exportation; the first crop of clover being cut about the middle of June for hay, and the second for the seed, which usually is a very profitable crop, though varying greatly in the yield. Although we have a large extent of bottom land, our farmers believe it more profitable to put it through the same rotation as their upland, depending for their winter provender upon corn

fodder and the first products or crop of grass seeds. En passant, I bear testimony to the gratifying fact that, *ceteris paribus*, those farmers among us have been the most successful who have been the most liberal in their expenses in the improvement of their soil, and every day confirms me the more strongly in the belief that sound economy requires that this improvement should be carried to the highest point of which the soil is capable, in the way of manuring, liming, subsoiling, draining, &c.

Liming is practiced to a very great extent, and with uniform good results—most generally upon corn, though often on wheat. The amount per acre varies from fifty to 200 bushels. Although I have known it applied in a perfectly caustic state with the corn crop, I never knew of more than one instance where it was suspected of burning the crop—the result might be different when applied caustic to growing wheat. Some farmers prefer to let it become effete, either in the kiln or small piles in the field—in either case it produces astonishing effects upon corn, wheat, and grass, which effects are visible for many years—the first results being the production of remarkable crops of white clover where no seed had been sown. On this point I may say that caustic lime will, in four days, reabsorb nearly its full volume of carbonic acid gas when spread on the surface—and consequently loses its burning qualities. The operation of magnesian lime is very different, and must be treated with great care—and the presence of magnesia is very easily ascertained by chemical tests.

The species of wheat usually sown is the Mediterranean. This wheat has lost its dark color, and has become as fair as the old species of red wheats, and is universally manufactured into superfine flour, for experience has convinced us, that with very rare exceptions it is exempt from the attacks of the fall and spring weevil, and the new insect which has made its appearance the last two years, preying upon the grains in the milk state. This species almost uniformly escapes the rust. The few days of priority of ripening over other species, being the secret of two of the above exemptions.

Of improved stock, large quantities have been introduced. It is, I believe, the general impression that a strong cross of the Durham upon the better breeds of our native stock, is better than the pure blood—because this cross, while it preserves the early maturity and good fattening qualities of the Short-horns, imparts the greater vigor of constitution of the native, and adapts it to the rigors of our winters, which are so much more severe than those of their native country. In addition, the less attention we pay to our stock, as compared to the English, should cause us to select a somewhat hardier race. For my individual self, I desire no more fancy pure bloods, except for the above purpose.

Of our Saxon, Merino, and French sheep, every person is sufficiently acquainted. A buck of the latter breed sold lately for \$500, and produced an amount of wool last spring which I will leave to some other person to communicate. In consequence of the depression in the wool market for some years, the amount of wool

produced in this region has, I think been reduced to about one-fourth the amount of many former years—perhaps even less. Our farmers had become discouraged with having to sell their crops of fine wool at from thirty-three to fifty cents; but herein they were in error, for I hesitate not to say, after an extensive acquaintance with wool growing for many years, that no branch of farming is more remunerative and certain than the growth of fine wool at three pounds per fleece, and thirty-five to thirty-seven cents per pound. The profit from increase is a very important item, most generally overlooked. Respectfully yours. G. E. H. *Near Brownsville, Pa., July 1, 1853.*

Cheap Wells.

It must be admitted that the present mode of digging and finishing wells for the supply of water for farms and dwellings, is rather behind the modern progress of labor-saving machinery. The shovelling and picking, and the slow and laborious turnings of the windlass, day after day, as the depth is gradually increased under these tedious and heavy labors, should give way to something nearer the horse-power and steam-engine principle. Wells are needed by every farmer, and are as necessary as food and clothing, and an improvement in making them would benefit millions. We are not about to propose any thing, but merely to suggest the subject to ingenious men; and in the mean time, by way of assisting such suggestion, we furnish a few of the interesting facts in relation to wells, stated at a late meeting of the Royal Agricultural Society of England.

In soils free from stone, and consisting of sand, clay, marl, or gravel, successful experiments had been recently made, at a very moderate cost, by the following mode. Instead of digging the common large well, to be walled with hard brick or stone, a hole was first made with an ordinary boring auger, or cylindric scoop, which brings up the soil to the surface. A cast iron cylinder, half an inch thick, five inches in internal diameter, and four feet in length, its lower end being brought to a sharp edge so as to penetrate the earth, is then driven down into the hole by means of a heavy mallet, or "beetle." To keep it steady, a collar of wood made by perforating a plank, is placed around it on the surface of the ground. The earth enclosed within it is again removed with the auger; and in order to obtain a further downward passage for the cylinder, a tool is used for the removal of the earth in the form of a circle beneath its cutting rim. It consists of a rod with a cross-handle like that of an auger, and at its lower end a claw at right angles to the rod, so that in turning the rod, this claw turns round and cuts the earth below the lower edge of the cylinder, which is then again beaten down with the mallet. Successive cylinders are placed one upon another, as they descend. In this way, a well of ordinary depth, or twenty feet deep, is commonly completed in a single day, the sides being incased with iron cylinders from top to bottom. A bed of gravel is then thrown into the bottom, and a metallic pump inserted. It was stated at the meeting above mentioned, that the expense of such wells, where a business was

made of it, did not exceed eight to fifteen dollars for a depth of twenty feet, including pump with lead tube; the cost of the iron cylinders is not mentioned, but if they are five inches inner diameter and half an inch thick, calculation would show that they would weigh about 37 lbs. to the foot in length, and could not therefore be afforded in many places in this country at less than a dollar per foot, unless made smaller and thinner. It may be that in soft earth, and especially soft sand, earthen tubing like drain tile, with the addition of glazing, might be strong enough, and might be adopted to great advantage, especially as some of the speakers at the meeting stated that the use of iron had been found to impart a rusty appearance to clothes washed in the water. From the statements of other members, it appeared that some had found a serious inconvenience from corrosion in the use of iron pumps, while others had experienced no evil whatever, owing undoubtedly to the difference in the water in different localities, and in the substances held in solution. The same difference had been found in the corrosion of lead pipes, some water not affecting them at all, and others eating them away in a few years. We have known a similar difference in the effect of water in this country. But it may be laid down as a rule that should in no instance be departed from, that water from lead pipes should never be used for cooking or as drink, which remains any length of time stagnant in the pipe instead of merely passing through.

The preceding mode would be applicable to such localities as contain large subterranean strata of water in beds of gravel, from which it pours out freely. There are many such, well determined, in regions where stone would not impede the sinking of the tubes. In other places where it is important to excavate large reservoirs for holding slowly collecting waters, this mode would not be applicable.

Royal Ag. Society of England.

The Fifteenth Annual Exhibition of this Society was held at Gloucester, on the 13th, 14th, and 15th July, and was considered upon the whole eminently successful. A very heavy rain, which continued for twenty-four hours without intermission, very considerably reduced the number of visitors. The number present on the first day was about 3,000—on the second, 10,424—and on the last not less than 40,000.

The number of implements was unusually large and interesting—numbering 2,052 in all. Among these were no less than twelve reaping machines, which were all tried on a field of rye. Of these, six, including Bell's, two of McCormick's, and three of Hussey's, were selected for further trial during harvest, under the direction of Mr. Pusey.

In the exhibition of stock, says the North British Agriculturist, “the number of cattle was 199; of horses, 97; of sheep, 292; of pigs, 149; total, 737. These numbers, taking into account the large and varied list of premiums, must be regarded as somewhat meagre. The admirers of a full exhibition have accounted for this paucity of number by the new rule of the Society

against over feeding. This we subjoin, “All animals sent for exhibition which shall, in the opinion of the jury, be in an overfed condition, will be disqualified by a jury before inspection by the judges; and a placard be placed over the standing of every animal that shall be so disqualified, stating the reason of such disqualification.” We consider this the most judicious and important rule ever introduced into a show-yard. It is notorious that many of the very best animals have been rendered useless for breeding by being overfed for our National Exhibitions. This rule, which many regard as extremely obnoxious, and which will possibly be attempted to be set aside, will, if steadily adhered to, lead to the abandonment of the practice of overfeeding.”

Experiments with Poudrette.

MESSRS. EDITORS—As all who till the soil are interested in the subject of manures, let me give you the partial result of some experiments tried during the few past years.

In the first place, I had a lawn of about an acre in extent, which had hitherto yielded only a light crop of grass, and which became quite dry and brown during mid-summer. As it was not convenient for me to break it up and seed down afresh, I determined last spring to try the value of some kind of top-dressing; and as sufficient barn-yard manure could not be had for this purpose, I resorted to the following expedients:

Dividing my grounds into several portions, I spread on the first part a light dressing of poudrette, (at the rate of about fifteen bushels to an acre)—on the second a more liberal dressing, with the addition of a compost made of a little barn manure mixed with rotted sods and other refuse; on the third a heavy coat of poudrette, (at the rate of thirty bushels to the acre,) with the addition of unleached ashes sufficient to cover the poudrette, and on the fourth a good dressing of ashes alone.

The grass throughout the whole lawn came up earlier, and grew more vigorously than it did last year. In the first part it was lightest, and most infested with weeds. The second and third gave a very good crop of hay, the difference between them being hardly perceptible. The fourth was a little better than the first. I ought to add that my soil is a clayey loam, inclining to become parched and cracked in summer.

So far as a judgment can be formed at this season of the year, and from a single experiment, I think there can be no doubt of the value of poudrette as a top-dressing for grass. On stiff, dry soils, a good compost from the barn-yard might be preferable, as that, by mechanical action, loosens the ground and protects the tender roots of the grass from the heats of the mid-summer sun. This region, (Oneida Co.,) is now, (July 25th,) suffering from a severe drouth, and yet my lawn looks much fresher than it did in the midst of a similar drouth last year.

I have tried poudrette also in my garden, on corn, beans, asparagus, pumpkins, squashes, grape-vines, &c. In the growth of corn, squashes, and beans, there is,

thus far, a perceptible improvement. But of these and some other things, I can give you a more complete report next fall. G. Clinton, July 26, 1853.

The Common Long White Turnep.

Experiments showing the Profits of Thorough Culture.

MESSRS. EDITORS—A late number of the Country Gentleman contains a notice of the premium root crops of this county, with the request that the successful competitors would report their respective modes of culture. I have since looked in vain for those reports. I regret this, because I believe that root culture is destined to effect a change in our agriculture so great as to deserve the name of revolution.

This may to some appear extravagant, but a little reflection will clear me from the charge of enthusiasm, since among the most advanced agriculturists such a revolution has already occurred. Throughout England, Scotland and Ireland, the root crop is the foundation of successful agriculture. It must become so here, when a rapidly increasing population shall make labor cheap, and create a far larger demand for food than our soil has ever yet produced. Allowing what has been proved by the most careful chemical analysis, that ten bushels of the poorest roots cultivated are fully equal to one of wheat or corn, and it follows that the same soil will produce two or three times as much animal sustenance in the form of roots as in grain. Our prospects may be influenced by future discoveries, but at present it appears quite probable that root culture will hereafter become the measure of our country's capacity for population. It is therefore important that successful experiments in this branch of agriculture should be reported, and through the press scattered broadcast over the community.

At the last exhibition of the Litchfield Agricultural Society, I had the honor of receiving, on root crops, three premiums, viz., on potatoes, ruts baga, and turneps. As the season during which the turnep crop is in this climate usually sown has arrived, it may perhaps prove useful to publish the mode and result of my experiment with this crop.

The ground selected was an old meadow, neglected for years—its surface slightly declining to the east. The origin of the soil was from the primary rocks, and its chemical composition such as naturally produces the oak, maple and ash forest trees.

The physical condition of the soil was such as is produced by neglect and bad culture. Its organic portion had been exhausted, having a subsoil cold, hard, and yellow, well supplied with pebbles and covered with a surface soil not more than two or three inches thick. It was retentive of moisture but free from standing water. Its product an annual crop of vile moss, and about half a ton of good hay per acre.

Its previous culture was a slight manuring, breaking up, and cultivating with potatoes the previous year. The result was the preparation of the soil for the turnep crop, and a small quantity of small potatoes.

Early in the succeeding spring the preparation for the

turnep crop began in earnest. First the rocks were, if necessary, broken, and all stones of whatever size removed from the field. Next the land was well manured and plowed not less than twelve inches deep, and thoroughly harrowed. After two weeks it was again manured, and plowed half as deep as before, and harrowed. With intervals of a few days it was plowed and harrowed twice more, and a small quantity of manure harrowed into the surface. At this stage of preparation the soil lay in a soft, uniform bed, at least twelve inches deep. The change effected in its appearance was surprising. The yellow, cold, shallow and hard soil of the preceding year, had become of a rich, dark color, warm, deep and light. Through this bed furrows were drawn fifteen inches apart, into which were drilled a composition of the richest manures from the farm, with ashes, lime and gypsum. The furrows were then turned back over these drills with the plow, leaving the land in ridges, which were slightly raked off and nicely finished with the garden rake. Through the tops of these ridges and directly over the manure, a channel was made for the seed, by drawing along them the corner of a hoe with slight pressure. Into this channel the seeds were dropped by hand, half a dozen in a place, with intervals of eight inches. They were then covered by drawing the back of the rake over them, and the planting was done, the seed deposited with regular spaces of fifteen inches one way and eight the other, on rounded and slightly elevated ridges, planted in earth made rich for their germination, and having a bed of rich manure only an inch or two below them, into which the young rootlets, as soon as formed, might plunge and revel.

As soon as the plants were large enough, they were thinned out by the removal of all but the best plants from each place, and carefully hoed by hand, at intervals of a week, four times, when they became too large to work among longer without injury to the crop. There was scarcely a vacant space or small plant in the field. They were very uniform in size; the tops covered all the ground, and formed a crop unrivalled for beauty, except by the larger and darker green-leaved ruta baga.

The variety of turnep was the common long white. To show the facility with which turneps so cultivated may be gathered, I will add the fact that they were all pulled and laid carefully in rows, with the tops all one way, by two persons, at the rate of more than five bushels a minute.

They were planted about the middle of July, and harvested on the 13th of November, and measured by disinterested men, and the result announced in the accompanying certificate. The report was verified in the usual manner before the Executive Committee of the Agricultural Society, and received the first premium. It is thought to be the largest crop of this variety of turnep ever reported. The following is an approximation to the cost and value of the crop per acre:—

Removing rocks and stones,	\$2 50
Manure 100 loads. \$50—half charged to first crop... .	25 00
First plowing,.....	2 00

Second do. and harrowing,	2 00
Third do. do	2 00
Fourth do. do	2 00
Forming ridges,	0 50
Raking and planting,	2 50
Weeding and thinning,	4 00
First hoeing,	2 00
Second do	1 50
Third do	1 50
Fourth do	1 50
Harvesting,	8 00
Rent of land, \$30 per acre,	1 80
One pound of seed,	0 75
 The whole cost of the crop per acre was,	\$59 55
The income was—a large quantity of tops,	\$4 00
2,102 bushels of roots, at 12½ cents per bushel,	262 75
 Whole value of the crop,	\$266 75
Cost deducted,	\$59 55
 Profit per acre.	\$207 20

The cost per bushel was a small fraction below three cents. JOHN T. ANDREW. *West Cornwall, Ct., July 23, 1853.*

We assisted in measuring the turnip crop raised by John T. Andrew, and also the land on which they grew, and certify that the crop yielded two thousand one hundred and two bushels and two-thirds per acre, harvested this day.

FRANKLIN BEACH,
CYRUS W. GRAY.

I hereby certify that the signers of the above certificate are men of truth and veracity. SILAS A. GRAY,
Justice of the Peace.

I certify that John T. Andrew, Esq., is one of the magistrates of this town, a successful farmer, a man of liberal education, and of undoubted veracity. SILAS A. GRAY, *Justice of the Peace. Sharon, Ct.*

A Cheap Ice House.

The best and cheapest plan for constructing an Ice House, for family use on a farm, has frequently been described in the Cultivator and Country Gentleman; but people are so shy of experiment, that I presume few have tried it. The original description came, I believe, from Mr. DOWNING. It was a wooden house, above ground, with a door in the side, and a framed roof, and ventilator. The roof was also made to project far over the sides, so as to form a sort of summer house, with rustic seats.

I constructed a house on this plan, last autumn, but so modified as to cost half the sum that Downing's plan would, as I did not care to make it ornamental. The filling of the sides, is also an important matter, and in this respect, the course I adopted is somewhat new.

I dug a hole in the ground under some trees, about one foot deep, for drainage. At each corner of the cavity, which was about ten feet square, I placed a rough post cut from the woods, and upon these posts nailed a siding about eight feet high on one side, and six feet upon the opposite side—the two remaining sides being bevelled to correspond. One foot from this box, I set four more posts at the corners, and covered the sides with boards as before. Cheap hemlock boards were used, of the common length of the lumber yard, ten and twelve feet, with little cutting. Here, then, I had one box outside of another box, and one foot of space between them, all around.

Now, how to fill the sides, was a question. Saw-dust, tan, or charcoal, I could not easily obtain, and I did not then know, what I have since learned, that shavings

answer as good a purpose as either of the other substances, if not better. But even shavings were not to be had at less than \$1 per load. Saw-dust, I am told, is highly objectionable, as it gets into a heat, decomposes, rots the timber, and will not keep ice well.

While I was trying to hunt up some filling, cold freezing weather came on, the ice was cut for the house and put in upon a layer of brush and straw, with straw at the sides and upon the top, and well packed. The top of the Ice House was then covered with loose boards, so lapped as to keep out the rain, but admitting some chance for moisture to pass off through various crevices. It was nearly two months before the filling was put in, and the ice still remained solid and firm. There were about sixteen tons of ice, I think, in the house, not more.

Having on hand a lot of coarse lime, which I did not expect to use, I thought I would mix it with common sand, from a Jersey soil, and make a sort of mortar filling for the sides, and see what that would do, so I set one of the farm hands to work at the job. He made the mortar, and filled the sides in part of two days. The lime was poor, and the sand not very sharp or clean, and the mortar was not good—but it set tolerably well, and in a short time became perfectly dry, and has never seemed to absorb any moisture since. The filling is of course perfectly air tight, and being entirely dry, must form a good wall for an Ice House. The board casing still remains upon the outside, as I do not suppose the filling would stand without. We braced the sides while putting in the mortar, to keep the boards from springing. The ice kept them straight inside.

Now for the history of the ice. It kept well till the first of June, when I observed it was beginning to melt. I looked about for the cause, and observed that the workman had dug a drain at one side of the box, from the interior, and had left it open to the air, supposing that some such drainage would be necessary. This, I at once perceived, must serve as a sort of flue to carry air from the bottom of the house to the top, or the reverse, whichever way the current might happen to set, making a constant draught through the body of the house. The straw upon the top of the ice, and particularly at the sides, was, at this time, quite moist and rotting. I immediately closed the drain with sods and earth, as tightly as possible. In a few days afterwards, I found the interior of the Ice House dry and cool, and the ice free from moisture, and keeping admirably. We have now had our hottest weather probably, and the ice still keeps well—and if not used, would, I have no doubt, keep all summer. The whole cost of the house was about \$20. It will last for many years. There is no door in the side of the house, and the roof is merely whole boards laid loosely on.

We get the ice out by raising the boards, and passing it through the roof in a basket. Plenty of ice is a great luxury in the country, and by such a contrivance as I have described, it is very cheaply obtained. We frequently make an impromptu ice cream for our visitors; and have also the satisfaction of dispensing several bushels of the frigid crystals to cool the parched tongues of our sick neighbors. The filling of lime and sand, made into a coarse mortar, can be obtained more readily than any other in the country, and I think it as good as anything else, if not better. Two air-tight boxes, made of plank, with a space of one foot between them, would, I think, answer equally well without any filling. J. S. HOUGHTON, M. D. *Philadelphia.*

Salting Hay and Stock.

MESSRS. EDITORS—In the last number of the Country Gentleman, I perceive that two of your subscribers have given their opinion upon salting hay; and as the subject is of some importance to farmers, will you permit a third to offer his views. I was formerly in the habit of salting most of my hay as it was packed into the mow, but experience, the best of all teachers, has learnt me better.

The method adopted for the last two years by your West Pawlet (Vt.) subscriber, of providing boxes of salt constantly for the use of his stock, is by far the most judicious; only I think he errs in supposing that much less salt is required in winter than in summer. Left to their own instincts and inclinations, horses and cattle will consume about the same in one season as the other; but sheep will consume considerably more in the winter season. This may be accounted for by the fact that dry forage is more difficult of digestion than green; and that salt helps to keep up a healthy digestion, particularly when the animal has free access to pure running water, there can be no doubt.

Since I have practiced keeping my stock supplied with salt, I find that my flocks of sheep (each 100 in number) will take up to from five to six quarts weekly in the winter season, and from three to four quarts in summer.

Before I commenced this practice, my sheep were very liable, in winter, to a disease called the stretches; which is nothing more or less than a stoppage in the alimentary canal, by a dry or hardened condition of the food, sometimes in severe cases causing a structural alteration in the small intestines, (not unlike the bilious cholic in the human system,) causing the animal to writhe with pain, frequently lay down and get up, and stand in a stretching position, true to the instinct of nature, as if conscious of an effort to draw the intestines back into their natural condition. This is a formidable disease, and often proves fatal, and let me here say, that the best remedy is a half gill of castor oil given in the first stages of the disease; but the prevention is better than the cure. I am now seldom annoyed by this disease, not having lost a single sheep by it since I have adopted the plan of having my salt boxes at all times supplied with St. Ubes or Turk's Island salt, and pure aqueduct water running in each yard. But it will not do to suffer your boxes to remain empty three or four weeks at a time, and then replenish them; your sheep will take more into their stomachs than they can dissolve, or their systems can manage, and they will die under its influence; such is their fondness for this valuable and indispensable ingredient, which is a certain and sure indication that the health and well being of the animal requires it in minute particles at all times and in all seasons.

The advocate for salting hay may fancy that these remarks tend to strengthen his opinion, for hay *evenly* salted will afford sufficient for the system in his view, to promote digestion and vigorous health, when fed out two or three times daily. In reply to this, I will again call to my aid *experience*, that never failing instructor.

It is impossible to salt hay *precisely even*, or just as much as the animal requires and no more; some parts will get too much and some too little; and in keeping sheep constantly on salted hay, they become weary of it, or cloyed as the saying is; they lose their relish for it, and a waste of fodder is the consequence, though by no means the worst consequence attending it, for it frequently produces (particularly among lambs) the scouring, a disease (similar to the dysentery, in the human system,) very difficult to manage and often proving fatal. When feeding out salted hay, both to sheep and cattle, I have noticed this disinclination to eat and relish their feed, and this cathartic tendency when it did not run into the dysentery form, and whenever a part of the mow that was not salted came along, they would eat with great avidity and overload the system, producing a swelling or bloat; and I very much doubt about its being the most proper and natural way to feed salt to our domestic animals in winter to mix it with their hay, even if a process could be arrived at that would give the animal just what its system required and no more. It is evidently more desirable, more in accordance with the instinct of nature, to go to his salt manger whenever he pleases, partake of as much or as little as he pleases; and having watched and learned the habits of our domestic animals, I believe it to be economy to practice accordingly, and that the best results will be attained thereby; while the loose and careless observer of these things, perhaps deeming them too trifling and minute for his attention, the neglector of his farm stock, will be continually losing by disease, by leanness of flesh, and by a diminutive weight in his annual clip of fleeces.

My annual hay crop ranges from 75 to 125 tons; usual average about 100 tons; to which I formerly applied considerable salt in packing away in mows. I now apply none, unless forced to it by bad hay weather, and used as a preventive against damaging in the mow. While I annually feed not less than 25 bushels to my stock, not three bushels finds its way into the hay mow. J. W. COLBURN. Springfield, Vt., August 1, 1853.

Deep Plowing.

MESSRS. EDITORS—I observe that you are turning the attention of your readers to deep culture, and to encourage this system I will give you my experience briefly.

Three years ago this spring I purchased a worn-out farm, as it was termed, and in the autumn plowed twenty-four acres of meadow with a Michigan sub-soil plow, from ten to twelve inches deep—sowed eighteen acres with spring wheat, and stocked. The balance was planted to corn, well manured with yard and special manures. A strip a rod in width, by the side of this corn, was plowed with an ordinary plow, and common depth—both treated alike; the latter yielded from forty to fifty bushels per acre—the former double those amounts. The meadow produced this season, second mowing, two and half tons and upwards per acre, of good timothy hay. This land was tolerably manured, and well drained. I took another old meadow of seven

acres two years since, after cutting *less than a ton* per acre—plowed as before, rolled thoroughly, drained completely, and as I could not spare manures for it, sowed winter wheat and stocked without manures, and a few days since Ketchum's Mowing Machine cut from that seven acres, inside of three hours time, twenty large loads of hay, over two and a half tons per acre, being the first crop.

With this plow no summer fallow is necessary—the plow may follow the rake—and hereafter I shall raise no crops on meadows, but manure and stock forthwith. Am intending to turn about forty acres next season, and to follow the Michigan plow with a subsoil plow, to cultivate fourteen inches in depth, and have no doubt that my neighbors who are complaining of the drouth, will see that my farm is not "altogether spoiled" by deep plowing, and that three tons per acre will be produced, drouth or no drouth. Respectfully yours, H. E. FOOTE, Sec. St. Lawrence Ag. Society. Ogdensburg, St. Lawrence Co., Aug. 8, 1853.

P. S.—You will please to announce that the Fair of this county will be held at Canton, on the 15th and 16th of September.

I hand you by this mail, also, one of our posters, that you may see what we are doing in this county to promote agriculture.

Foreign Correspondence.

We announced some time since, that we had made an arrangement with the Rev. J. A. NASH of Amherst, (Mass.,) author of the "Progressive Farmer," to write a series of letters on the Agriculture of Great Britain, during a tour he was to make expressly for the purpose of examining into the agriculture of that country, preparatory to entering upon the duties of Instructor in Agriculture in Amherst College, a station to which he was appointed about a year since. Mr. NASH sailed for England in May last, and we have been disappointed, as we doubt not our readers have been, in not hearing from him before this. But the following private note, which we trust he will excuse us for giving to the public, will explain the cause of the delay, as well as afford them an assurance that they may expect, ere long, to hear the carefully matured views which he has formed of European Agriculture as compared with our own.

LONDON, July 16, 1853.

L. TUCKER, Esq.—I owe you an apology for not having forwarded you anything for the COUNTRY GENTLEMAN. I have been through Ireland, and have been more or less into a majority of the English counties. My present purpose is, to spend a few days in Scotland—then pass through Holland, Belgium and a corner of France, to spend a short time in Paris, and then to return to London, not to jaunt any more, except for short trips into the counties near this place, but to settle down, and mature some views, which may be worthy of the conditions on which I am to write.

English farmers, from the highest to the lowest, are wonderfully hospitable. Their doors and hearts are wide open. I have become intensely interested in their agriculture. Still, agriculture here is a very different thing from what it is among us. The climate differs,

more even than I had supposed. The capabilities of the soil are different, and the wants of the community different. At the great Exhibition of the Royal Ag. Society at Gloucester, on Wednesday, Thursday, and Friday of this week, I saw very much to excite admiration, but far less which I am ready to commend to the imitation of Americans. Indeed I do not feel prepared to speak, till I have seen more and thought longer. Invitations are now before me for looking into usages in various parts of Scotland, and on the way thither, relating to almost every branch of agriculture; and I wish to suspend all remarks till I shall have made further investigations.

I could now tell your readers that there are many usages in this country which American farmers should imitate, and more which they should avoid, if they would escape ruin; but this would not amount to much—would hardly be worth the space in so good a paper as yours—and I want more time, in order to make up my opinions deliberately and discriminately. You may rely upon me to do my best to fulfill my engagement with you satisfactorily ere long, but it must be at a later period than was expected.

Wonders are being done here by reducing all the manures of a farm to the liquid state. I have seen this practice on the farm of Mr. LITTLEDALE, at Liverpool, and am to see it on the farm of Mr. MECHI of Essex, on Wednesday next. It is a matter that requires careful examination, and I have not yet had opportunity to examine it sufficiently. It is so with other important matters. I must therefore beg you to be patient with me a few days longer. Of whatever sins and follies I may be guilty, I hope not to write what good practical farmers would ridicule on the one hand, nor what might mislead them on the other. With esteem and respect, I am yours, J. A. NASH.

Glass Water Pipes.

A correspondent in Western Pennsylvania inquires if glass pipes could be made to take the place of lead ones, in conveying water under ground, for culinary purposes. Cannot some of our glass manufacturers answer this, giving the cost, if made of tough and cheap glass.

Where the descent is nearly uniform, so as to receive no pressure from a head of water, glazed earthen pipes like those used in tile-draining, would be cheap and safe. The joints might be united with hydraulic cement. Water pipes have been wholly made of hydraulic cement (or water lime) very successfully; but we would propose to procure the smallest size tubular tile used in draining, and surround it with a bed of water-lime mortar. A strong, durable and safe pipe would thus be made, without requiring any skill whatever in construction.

In the case mentioned by our correspondent, the spring is five feet higher than the place to be supplied, 50 rods distant, and a hill of ten feet rises between. It is not probable that even a lead tube could be made to work as a syphon at that distance; and even if so, it would be attended with constant interruptions, especially from the accumulation of air at the highest part. It would therefore be cheapest to cut through the hill.

The Dairy.

Cheese Making from a Small Dairy.

We have received requests from several of our lady correspondents, to write a short article on cheese making, especially in reference to that large class of farmers who keep but few cows. It always gives us pleasure to comply with the requests of the ladies, especially of those who are good housekeepers—know how to milk a cow, make good butter and cheese, and cultivate a small flower-garden.

First rate cheese can be made from a few cows, but it is attended with more labor in proportion to the amount made, than in a large dairy, inasmuch as the curd has to be made every morning and placed aside till you have sufficient to make a good-sized cheese. The milk is placed in a tub, and warmed to the proper temperature, (95 deg. Fahr., or about as warm as when taken from the cow) by adding a portion of heated milk. The rennet is then added, the milk well stirred, and afterwards let alone till the curd is well come. The time this occupies varies from fifteen minutes to two hours, according to the amount of rennet, the temperature, &c.—the hotter it is put together, and the more rennet is added, the quicker will the cheese come. As a general thing, the longer it is in coming, the tenderer and sweeter will be the curd. If it comes too quickly, it is owing to an excess of lactic acid being formed from the sugar of milk; so that the curd has that hard, tough, white appearance, that is the case when the curd is precipitated by vinegar, or any other acid; but, if there is a very slow formation of lactic acid, the curd is gradually precipitated in flocks, is less dense, and very sweet and tender. It is then broken up quite fine, either by hand or a curd-breaker made for the purpose, which cuts it into very small pieces. After this, it is allowed to stand and settle. The whey is then drawn off and passed through a sieve, to remove any curd there may be in it. The curd is then placed in a strong cloth, and well pressed, to remove the whey. It is then placed in a cold place, and the operation repeated daily—or every other day, if the milk will keep sweet, as it will in the fall—till there is curd enough to make a cheese of the desired size. When the right quantity is obtained, the curd is all broken up very fine, salted and well mixed. In putting the curd in the vat to be pressed, a cloth sufficiently large to cover the whole cheese is placed in the vat, and into this cloth the curd is put. When the curd has filled the vat, a "fillet" (usually made of sheet tin, and from three to six inches wide, and sufficiently long to lap over four or five inches when placed round the cheese) is placed inside the vat for an inch or so, and the cloth drawn up straight, so that when being pressed the fillet will not cut it. The whole of the curd is then put in, the cloth turned over the top of it, a smooth board placed over this and then it is ready to press. After it has been pressed for some time, it is taken from under, and punctured all over with a skewer, either of wood or iron. Place it in the press again, until it has become sufficiently consolidated to take out of the vat without falling to pieces. It must then be turned, or inverted in the vat, and a clean cloth put round it. Place it again under the press, occasionally turning it and putting round it fresh cloths, till the cheese when pressed does not wet them. It is then all right, and should be kept in the dairy, or other cool, damp place, for a few days, placing a little salt round it, when it may be taken to an upper room, where it will require turning very frequently, or the side next the floor will mould. Let the room be dark and well ventilated.—*Western Agriculturist.*

Experiments in Making Butter.

A board of commissioners has been appointed by the Belgian Government, to examine various agricultural implements. The commissioners made also experiments

with Lavoisy's churn, with cream of one and the same quality, temperature, and under like circumstances.

In one experiment, a small quantity of cream was much churned; in another the cream was slightly churned; and in a third experiment, a large quantity of cream was much worked by the paddle of the above named churn; and they found that much churning, at fifty-four degrees Fahrenheit, had no influence upon the quality of butter; that the slow or rapid formation of butter, or, in other words, the longer or shorter duration of churning, had no influence upon an increase or decrease of the quantity of butter in a given quantity of cream.—*Ag. Praesician, Oct., 1852.*

Rural & Domestic Economy.

Drying Vegetables for Long Keeping.

At a late meeting of the New-York Farmers' Club, specimens of various vegetables were presented, and soup made from them exhibited, which had been dried by a secret process, so that they could be kept for an indefinite length of time, with a perfect retention of flavor. They are cut into thin slices before subjected to the drying process, but this is all the information on this point that we are favored with. The process originated in France, where for some years it has been in successful practice. It has been tried with satisfactory results on all common vegetables, except potatoes and beets. The New-York Agricultor says: "We tasted (imported) cabbage, and found it as good as new—to our taste." Cabbage loses about fifteen parts of water out of sixteen, by the operation,—carrots about nine parts out of ten. The cost of preparation is said to be about two cents for each pound of the dried article. They have already remained uninjured during a four years sea voyage. Vegetables dried in this way, we should think, would form an excellent accompaniment for meat biscuit.

White Sheep Skins for Door Mats.

Take two long-wooled sheep skins, and make up a strong lather of soap; the sign of proper strength is when the lather feels slippery between the fingers. When the lather is cold wash the skins carefully in it, squeezing them between the hands so as to take all the dirt out of the wool. When this is accomplished, lift out the skins and wash them in cold water until all the soap is extracted. Have a vessel of clean cold water ready, to which some alum and salt (about half a pound) which have been dissolved in a small quantity of hot water, are added, and the skins left to steep all night. They are taken out in the morning and hung over a pole to dry. When all the alum water has dripped off they are spread out on a board to dry, and carefully stretched with the hand from time to time. Before they are thoroughly dry, a composition of two table spoonfuls of alum, and the same of saltpetre, are ground to powder, in a mortar or otherwise, and sprinkled carefully on the flesh side of each skin. They are then placed the one on top of the other, leaving the wool outside, and hung upon a rack of salts, in a barn, shed or dry, airy place, for about three days, or until they are dry—they should be turned every day. After this they are taken down and the flesh side scraped with a blunt knife, and each skin trimmed for a mat. The flesh side may then be rubbed over with pipe clay, beat with a switch, and will then be found supple, of a beautiful white color, and fit for a door mat for a mechanic or prince.—*Sci. Am.*

Valuable Recipes.

[SELECTED FROM VARIOUS SOURCES.]

Cherry Marmalade.—Remove the stones and stalks from the cherries, and rub the cherries through a sieve, add to this result a little currant juice, say half a pint to every three pounds of cherry; put the whole over the fire, stirring into it three-quarters of a pound of fine white sugar to every pound of the fruit, and boil it until it becomes a thick jelly; pour it into jars or moulds, and when it is cold, spread on the top of each jelly a paper dipped in brandy, cover each jar or mould tightly, and keep it in a cool and dry place until it is wanted.

Currant Marmalade or Jam.—This is made in the same manner as cherry marmalade, using currants alone and adding to every pound of currant pulp and juice, one pound of fine white sugar.

Raspberry Marmalade or Jam.—Pass the raspberries through a fine sieve to extract their seeds, add to them their weight in fine white sugar, and boil them, and stir them over the fire until you can just see the bottom of the stew-pan; treat it as Quince marmalade.

Currant and Raspberry Jelly.—Pick over a quart of red currants, a quart of white currants, and a quart of raspberries; put the whole over the fire, stir them, and boil them about ten minutes, then rub them through a sieve, strain the liquor while hot through a jelly-bag, add a pound of fine white sugar to every pint of the liquor, boil and treat it as directed for apple jelly.

Pineapple Jelly.—Pare and grate the pineapple, and put into the preserving-pan with one pound of fine white sugar to every pound of fruit; stir it and boil it until well mixed, and thickens sufficiently, then strain it, pour it into jars, and when it has become cool, cover the jellies with papers wet in brandy, cover the jars tightly, and treat them as apple jelly.

Black Currant Wine.—Strain the currants, which should be perfectly ripe. To each quart of juice put a couple of quarts of water and three pounds of sugar; stir the whole well together, and let stand 24 hours without stirring; skim and set in a cool place to ferment slowly. Let it remain three or four days; if at the end of that time it has ceased fermenting, add one quart of French brandy to every fifteen gallons of the liquor, and close the cask tight. Bottle when clear; it will be fit for use in six months, and improve by age.

Black currant wine is excellent in cases of sickness, such as for diseases of the bowels.

Gooseberry Wine.—Bruise the berries which must be green, put them in a closely covered jar and set the jar into a pot filled with boiling water; keep the water boiling around the jar, till the gooseberries are soft, then take them out, mash them with a spoon and put them into a jelly bag to drain; when all the juice is squeezed out, measure it, and to a pint of juice allow a pint of sugar, boil twenty minutes, skim well.

Blackberry Wine.

It may not be known to many of your subscribers that they possess in the blackberry, grown so unwillingly by them in their fields, the means at once of making an excellent wine and valuable medicine for home use. To make a wine equal in value to Port, take ripe blackberries and press them, let the juice stand thirty-six hours to ferment, skim off whatever rises to the top, then to every gallon of the juice, add a quart of water and three pounds of sugar, (brown sugar will do,) let this stand in open vessels for twenty-four hours, skim and strain it, then barrel it until March, when it should be carefully racked off and bottled.

Blackberry cordial is made by adding one pound of white sugar to three of ripe blackberries, allowing them to stand for twelve hours, then pressing out the juice, straining it, adding one-third part of spirit, and putting a teaspoonful of finely powdered alspice in every quart of the cordial—it is at once fit for use.

This wine and cordial are very valuable medicines in the treatment of weakness of the stomach and bow-

els, and are especially valuable in the summer complaints of children.

As this is the season of such disorders, and as the blackberry will soon be ripe, I have thought it necessary to make known these recipes.—*Southern Planter.*

ANOTHER METHOD.—A lady friend, of Atlanta, gives us the following simple and easy method of making Blackberry Wine and Cordial. We have tried the wine made after this recipe, and can recommend it as most excellent:

Blackberry Wine.—To three quarts of blackberry juice, add 1 quart of water and 3½ pounds of sugar, (white or brown.) Put in an open jar, and let it stand two or three days to work; then bottle and set away in a cool place for a year before using.

Blackberry Cordial.—Take any convenient quantity of blackberries, and stew in a preserving kettle for half an hour; then strain and boil again for half an hour, adding one pound of sugar to each quart of juice, using spices to the taste. When cool, add one gill or more of the genuine Cognac brandy to each quart of juice. Then bottle and cork tight.—*Southern Cult.*

Drinks for Harvest.

There is nothing which creates thirst more than laboring in the sun—and such being the case, it is the duty of the master to have a cool and refreshing drink supplied at least once in each hour to his hands in the field. A hand would be well occupied, whose time was devoted to this object, and it would be well to have a small hand cart fitted up with a five gallon keg or half barrel, in which should be a drink comprised in the proportion of *five gallons of water, half a gallon of molasses and one quarter of a pound of ginger.* The whole should be well stirred together, and served out hourly. This drink we have frequently recommended, because we know it to be invigorating, refreshing and safe, no matter how cool the water may be. The cooler the water, the more grateful will it be to the palate—the more refreshing to the system—the surer of giving tone and strength to the harvester.—*American Far.*

Cure for Erysipelas.

The editor of the Salem Observer gives a public cure for this distressing disorder, from which he has been a great sufferer. He says, “a simple poultice made of cranberries, pounded fine and applied in a raw state, has proved in my case, and a number also in this vicinity, a certain remedy.” In this case the poultice was applied on going to bed, and the next morning, to his surprise, he found the inflammation nearly gone; and in two days he was as well as ever.

A New Mixture used for Washing Cloths.

In Berlin, Prussia, the washerwomen use a mixture of 2 ounces of turpentine and a quarter of an ounce of spirits of sal ammoniac, well mixed together. The mixture is put into a bucket of warm water, in which half a pound of soap has been dissolved. Into this mixture the dirty clothes are immersed during the night, and the next day washed.

The most dirty cloth is perfectly freed of all dirt, and after two rinsings in fresh water, the cloth has not the least smell of turpentine. The cloth does not require so much rubbing, and fine linen is much longer preserved by it.

A SECRET FOR A FARMER'S WIFE.—While the milking of your cows is going on, let your pans be placed in a kettle of boiling water. Turn the milk into one of the pans taken from the kettle, and cover the same with another of the hot pans, and proceed in the same manner with the whole mess of milk, and you will find that you have double the quantity of sweet and delicious butter. Try this, dairy women, and write us the results will you?—*Extract.*

Horticultural Department.

The New Ohio Strawberries.

Great interest has been felt as to the character and value which a fair trial should develop for these new sorts, in any other localities than Cincinnati, the place of their origin. It appears that they have sustained fully at Philadelphia their western reputation; while at Boston, according to Hovey's Magazine, they have proved almost a total failure. Some persons, no doubt, will be ready to make great allowance for the decisions in the latter instance, on account of previous prejudice in favor of those of Boston origin, yet this cannot be the sole reason of the unfavorable verdict. In Western New-York, McAvoy's Superior, which stands at the head, has proved an exceedingly productive, very large and high flavored berry, better in quality than Hovey's Seedling, but not equal to Swainstone and Burr's New Pine. We should think it too soft for extensive marketing. It may afford some interest to our readers to give, side by side, the characters of these four seedlings, as first given by the Cincinnati committee, and as now given by C. M. Hovey at Boston, and by the Pennsylvania Horticultural Society at Philadelphia, where the climate is not unlike that of Cincinnati.

McAvoy's No. 1.—"Pistillate, large, prolific, bright scarlet, not high flavored, but the handsomest dish on exhibition"—*Cin. Com.* "Does not set freely, even with a good staminate variety beside it; only a moderate bearer of fair size, color too dingy, and watery nature of the fruit renders it almost useless as a market berry; flavor rather insipid"—*Hovey*. "Large, roundish, deep scarlet, seed light crimson, indentations rather deep, intervals not ridged, flesh whitish, partly stained with red; flavor agreeable, quality 'good,' perhaps 'very good;' an abundant bearer."—*Phil. Com.*

Schneike's Pistillate.—"Large, medium quality"—*Cin. Com.* "One of the sourest strawberries we ever ate, and not only sour but bitter, and disagreeably flavored; color pale scarlet, and berries, even before ripe, look as if they had been picked and begun to decay; we consider it quite worthless."—*Hovey*.

Longworth's Prolific.—"The largest and most prolific hermaphrodite strawberry known to the committee, and equally prolific with any other variety. The plant is more hardy than Hovey's, and recommended for general cultivation, after four years' trial"—*Cin. Com.* "A very good berry, but only of fair size and medium quality, being rather acid. The color is dull, and the general appearance of the berry inferior"—*Hovey*. "Very large, roundish ovate, brilliant crimson, seed of the same color, sometimes yellowish, set in rather deep indentations with rounded intervals; flesh red, flavor fine, quality 'very good;' a variety of great excellence, perfect in its sexual organization, and remarkably productive, a rare circumstance with staminate varieties of large size"—*Phil. Com.*

McAvoy's Superior.—"Pistillate, very prolific, large, dark colored, high flavored and luscious; a hardy

plant; the specimens exhibited superior to Hovey's Seedling or any other strawberry that came under the examination of the committee, and entitled to the premium of \$100, offered by the Society in 1847"—*Cin. Com.* "Very little different from No. 1. The berry is only of fair size, and of a very dark, dingy color, like the Hautboy,* with yellowish seeds; flesh thin and watery, and flavor only of medium quality. It has the same fault as No. 1, does not set and fill up well. Though the best flavored of the four, it is far inferior to many of the older varieties"—*Hovey*. "Mr. Cope's specimens were of great size and beauty, some of them measuring five and a half inches in circumference. Fruit very large, roundish ovate, occasionally slightly necked, deep brilliant crimson, seed crimson, sometimes yellow, set in indentations not deep, except in the largest specimens, when the intervals are also somewhat ridged; flesh red, flavor exquisitely fine, quality 'best'"—*Phil. Com.*

It is interesting thus to compare results in these three distant cities, and although some allowance will be made for the unfavorable character of the report from Boston, we are satisfied that these sorts, or most of them do better further south than at the latitude of Boston and Rochester; although, as we have already stated, McAvoy's Superior has proved a fruit of great excellence and value in the neighborhood of the last named city.

Amateur and Window Gardening.

STRAWBERRIES.—Few plots of ground attached to the dwelling, are so small as not to admit the growth of some fruit as well as flowers. Foremost among fruits for small spaces, is the strawberry, being a delicious fruit, and one that soon spoils if exposed after gathering; consequently those in the market can rarely be obtained so nice as from the garden. Besides this, a strawberry bed, if placed in the right part of the garden, is at no time unsightly, but while in flower and fruit, really beautiful. As this is a crop to stand two or three or more years without disturbing, extra care should be taken in preparing the soil. Now being a good time to set about making a fresh plantation, we give the following as a good method, and can assure all who may feel disposed to try it, that the little extra labor required in preparation, will be fully compensated by quantity and quality of fruit. Take out a trench two feet wide, two spits deep, the width of the ground, and place it at the other end for filling up at the last. Loosen up the bottom of the trench, and place a good coat of rotten dung, if two or three inches thick so much the better. Take off the top spit of the next, same width, and place on the dung; then another coat of dung. This may be somewhat lighter than the bottom coat, and then the bottom spit on the top off this; and so go on till the whole is completed. If the second spit should happen to be very poor, hungry soil, it will be best to keep the bad below;

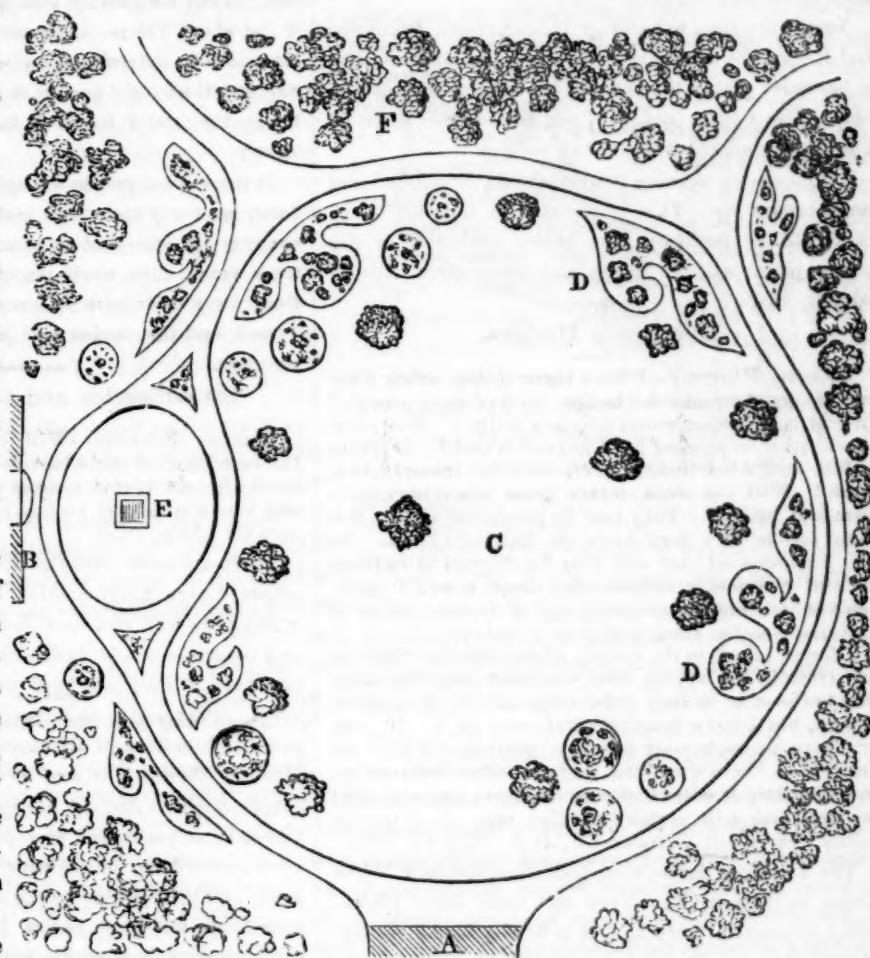
* *Hautbois*, (high wood, literally, from the tall fruit-stalks,) and not hautboy, a musical instrument.

Suburban Gardens and Grounds.

The accompanying plan of a flower garden and lawn combined, is from "Cottage Residences," by A. J. Downing, and is a fine specimen of landscape gardening. There is nothing of the stiff, awkward appearance which a geometrically arranged garden has, and such plans are more easily adapted to particular locations than any other style.

The author says of it: "The modern taste of discarding any set flower garden, and instead of it, arranging the beds of choice perpetual-blooming plants in and around a small lawn, in graceful and harmonious forms, is by far the most satisfactory, in a majority of cases. It is especially so in all small places where the ornamental grounds are too limited to allow of separate scenes. In such cases the grouping of flowers round a lawn, having only one or two colors in a bed, heightens the beauty of the lawn itself, while the flowers are enjoyed, perhaps, more than in any other way."

In this plan, A is the dwelling house; B the conservatory; C the lawn; D flower beds; E vase, sun-dial, fountain, or rustic basket filled with flowers; F is a boundary belt of trees and shrubs, shutting out the portion of the ground not strictly ornamental. "In practice it is found that small circular beds about three feet in diameter, grouped in twos and threes, (like those on the left of D,) are more convenient and effective than irregular beds. Single specimens of trees, such as grow beautifully alone, should be introduced in the lawn, (C) to give it a picturesque character."



but by all means loosen and apply dung two spits deep, as the roots have a far greater chance of going down beyond the reach of drouth in this hot climate, than by ordinary digging.

After the first shower, put in strong healthy plants, 2 feet 6 inches between the rows, and 1 foot in the rows, keeping them watered till they have taken hold of the soil, and next season a fair crop of fruit may be expected, and the second year a heavy one. For small plantations it is best not to have too many sorts, but select some known and tried ones, such as *Large Early Scarlet*, *Hovey's Seedling* and *Burr's New Pine*. Keep the hoe among them constantly, as they are much benefitted by this, besides destroying the weeds.

THE RASPBERRY is another useful fruit to grow in a limited space. As soon as the canes have done bear-

ing cut them clean out, and all young ones to four or five for bearing next year. This allows the air to circulate among them, and ripens their wood better than when left till fall or spring.

CURRENTS AND GOOSEBERRIES are benefitted by clearing away any useless suckers and wood—in fact, as little should be grown as possible that is to be taken out in winter or spring, as by taking them out now, the sap thus uselessly expended if left to grow, will be concentrated in the wood for another season.

MILDEW ON THE GRAPE, has again made its appearance. Sulphur, if applied in time, will stop it. It may be dusted on dry, or what is perhaps best and most convenient on large spaces, is to mix it in water. If kept stirred, it will be held in suspension in the water, and may be applied with the syringe or garden engine.

Where TOMATOES have been planted they should be constantly topped beyond the fruit, and if extra fine are required for exhibition, thin out all small ones.

All vegetables should be picked when ready, as a much greater succession is obtained than by allowing them to become too old.

Now is the time to increase CARNATIONS, PICOTEES and PINKS, by layers and pipings; the latter require to be under glass; they should be done as soon as possible. Use a little leaf mold and sand to root them in. They repay all the trouble they require.

SEEDS of any striking flowers, should be marked and saved separately. This is the way to improve them. It should be perfectly ripe before gathered, or the young plants will be feeble and more susceptible of injury. E. S.

Evergreen Hedges.

MESSRS. EDITORS—I have learned that Arbor Vitæ makes a good ornamental hedge. Is it of rapid growth? In how many years would it form a hedge? How close should they be planted? What soil is best? Is spring or fall, and what month, preferable for transplanting them? Will not stock injure them after they have formed a hedge? They can be purchased of the size from one to two feet high, in Bangor, Maine, for \$15 per thousand, but can they be shipped to Indiana without "seriously endangering their lives?" Also, can you tell me the probable cost of transportation of half that number from that point to this?

I forgot to ask in the proper place, whether there be any truth in the saying, that you must plant the same side to the sun, as they grew originally? This seems absurd, but I have heard several insist on it. If you, or others, through your valuable journal, can give me answers to these questions, and any other information on this point, it will be of advantage to some of your readers, and will certainly oblige one. C. KEMBLE. Little Flat Rock, Decatur Co., Ind., July 12, 1853.

The American Arbor Vitæ, (called erroneously, White Cedar in Western New-York and some other places) forms a beautiful screen, but is hardly strong enough to resist the assaults of cattle. It will, however, become so after many years, if allowed considerable freedom of growth, and is not sheared too closely. We have seen old trees by the road side that had been browsed by cattle, and rendered thick, stubby, and impassable. The hemlock makes a more beautiful screen than the arbor vitae, but is still slenderer when young. The Norway Fir will soon form a strong hedge against farm animals. All these bear any amount of shearing.

The rapidity of growth depends very much on the soil and treatment. Well cultivated, on rich soil, which is best, two-feet plants will form a screen six feet high in four or five years, which will improve much by thickening for three or four year more, and more slowly afterwards. This plant will make shoots each year about two feet long; Norway Fir, three to four feet. The distance asunder, may be one and a half to two feet.

Spring is the best time for transplanting, just as the buds are swelling, but the precise time is not important. It is, however, very important that some earth should remain on the roots when they are removed, and that the roots be well muddled. They may be transplanted in autumn, set in rather thickly by the roots, and set out early in spring; but it would be better to take

them up early and send them in spring. From Maine to Indiana would be a long journey, unless sent on railway by express without any attendant delay. It would be better to procure them nearer. Good plants, one to two feet high, hardened to open ground, are, if we mistake not, offered for sale by Dell & Collins, of Waterloo, N. Y., at about \$25 per thousand. The cost of transportation may be determined by weighing a few trees, calculating the weight per 1,000, and adding one-half more for packing, and learning the price from forwarding agents.

It is no consequence whatever which side of young trees, or of any trees with leaf-covered trunks, is placed towards the sun—but is more necessary for old bare trees which have stood many years, and which sometimes loose their bark by scorching if the position is reversed, and the shaded side is placed directly towards the rays.

Strawberries and their Culture.

MESSRS. EDITORS—Will you inform us which are the best kinds of strawberries to cultivate in hills, and have the old plants remain long without renewing? and where such may be had? P. PRATT. Deep River, Ct., July, 1853.

There are some varieties of the strawberry, as for example, Large Early Scarlet, Cincinnati Hudson, &c., which grow well and bear abundantly if allowed to run and cover the whole bed, although the fruit is larger and finer if they are kept well cultivated in hills or rows. Other sorts, as Boston Pine and Black Prince, need high culture in all cases, and to be kept in hills. Hovey's Seedling is best if so treated. Strawberry plants begin to decline in vigor and productiveness in two or three years, and must be renewed. This may be very easily done by allowing some of the runners to grow, and then pulling up the old plants. An acquaintance keeps his large bed of Hovey's Seedlings in the most luxuriant and productive condition, by yearly pulling out all the old roots. The self-renewing system, practiced by allowing the runners to cover the space between the rows every second or third year, and then spading under the old rows, and leaving the new plants, is a very good and cheap practice.

The best strawberries are Burr's New Pine and McAvoy's Superior, for large, very productive sorts, of high flavor, but too soft for marketing; Large Early Scarlet, best very early sort, prolific, and good both for market and home use; Cincinnati Hudson and Rival Hudson, later, scarcely equalled for marketing, but hardly first rate in flavor; Hovey's Seedling, mostly quite productive, and very large and showy, and therefore high-priced in market; and Boston Pine, an excellent sort, but requiring high culture in hills. All of these except the Scarlet and Boston Pine, are pistillates, and require a few plants of either of the two latter to grow near them to produce fertility of flowers, and yield a crop.

SETTING TREES TOO DEEP.—A cultivator finding some heart cherry trees which had been set out three or four years did not grow well, examined by removing the earth, and found they had been set nearly a foot deeper than they should have been.

The Birch as an Ornamental Tree.

The fragrant birch above him hung
Her tassels in the sky.—BRYANT.

MESSRS. EDITORS—Enclosed I send you a drawing of the leaf and blossom of the Black birch, a native of our forests, which has grown to be a favorite tree of mine.*

I frequently see an article in the columns of The Cultivator and The Horticulturist, enumerating various kinds of forest trees as suitable shades for the lawn or street, and the Birch not among the number. And I noticed especially an article in The Horticulturist for 1852, from the pen of the late lamented A. J. DOWLING, encouraging the planting of more of our native forest trees in preference to those of foreign production, that manifested a feeling in which I felt a strong sympathy; but those sympathetic feelings were not a little dampened when, in looking over the list I could not find my favorite tree among the number which that popular writer had named as being worthy to take the place of foreign trees; yet I find it had not entirely escaped his notice, for, in looking over "Downing's Landscape Gardening," I felt relieved of my mortification, those sympathies were heightened, and my affections were more closely entwined around the spirit of that departed man, when I read the following remarks on the Birch:

With us it is a great favorite; and we regard it as a very elegant and beautiful tree, not less on account of the silvery white bark of several species, than from the extreme delicacy of the spray, and the pleasing lightness and airiness of the foliage. In all the species, the branches have a tendency to form those graceful curves, which contribute so much to the beauty of trees. * * *

The American sorts, and particularly the Black Birch start into leaf very early in the spring, and their tender green is agreeable to the eye at that season; while the swelling buds, and young foliage of many kinds, give out a delicious though faint perfume. Even the blossoms, which hang like little brown tassels from the drooping branches, are interesting to the lover of nature.

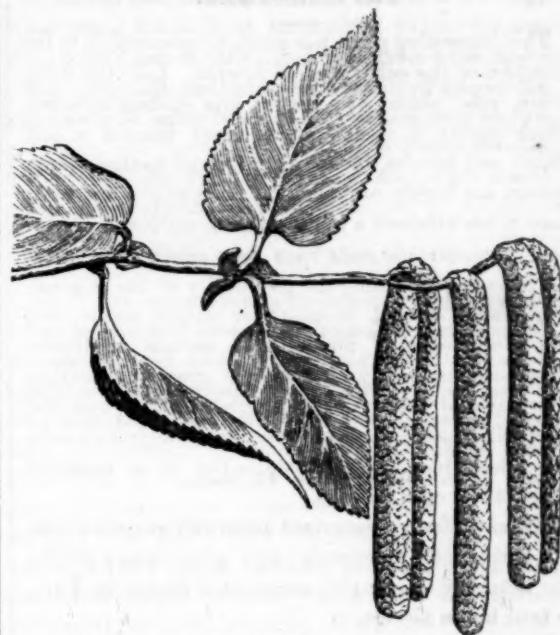
And in a quotation from Bernard Barton, he says:

See the beautiful birch tree fling
Its shade on the grass beneath—
Its glossy leaf and its silvery stem;
Dost thou not love to look on them?"

Its smooth silvery bark, its straight and beautiful trunk dividing out into numerous stately branches, and subdividing into such a dense mass of fibrous boughs, forming that "extreme delicacy of spray," with its still thicker mass of glossy and beautiful leaves, through which the rays of the sun cannot penetrate. Its pendulous blossoms hanging like silver-tissued tassels, its cleanly habits, as well as neat appearance, together with its fragrance, render it to my taste one of the most inviting shades in the American forest.

Were I on the banks of the Hudson, I would seek out and select some sequestered spot where Downing used to ramble in his meditations; that spot I would consecrate to the lover of nature, adorned and beautified by art; and there I would plant "the fragrant birch," whose beautiful and stately trunk should point heavenward, while its fragrance should lend a sweet perfume

* We have been compelled to reduce the drawing to one-half its original diameter.—ED.



BLACK BIRCH. *Betula lenta*, Linn. (Male flower.)

to the surrounding atmosphere, and through whose leaf and "little brown tassels hanging from its drooping branches," the sighing breeze should sing a requiem o'er his departed spirit, as it would occasionally return, methinks, to visit that consecrated spot. Respectfully yours, ELI MOORE. Southington, Conn.

Cultivation of the Cranberry.

Most of the attempts at cultivating the cranberry have been decided failures; but a very few quite successful experiments have served to keep up a succession of efforts, with the hope of final and uniform success. Most usually the most sanguine have had to hope against hope. A very enterprising cultivator has just informed us that although his plants grow well, and begin to bear, on the low ground on which he has planted them, and where they succeed much better than on upland, yet the growth of the grass so greatly overtops them, that he is nearly ready to give up the struggle, having spent about forty dollars already the present season in fruitlessly endeavoring to weed them.

A letter lately received from a close and experienced cultivator, contains the following remarks on this subject: "Much has been said about raising cranberries on upland; but I think the main point has not been understood. Such land as ours (strong, fertile soil of Western New-York) would not produce cranberries; but I have seen such among the Pennsylvania mountains, (called the Beech Woods,) which would doubtless prove congenial to that plant. It requires a cold, sour soil, such as would agree with the black spruce, and disagree with Indian corn."

"There are also great tracts in the primitive region north of the Mohawk, which I should judge would be very favorable—wet, sour land, where corn would refuse to grow, or to any advantage. Could not such farmers, depending on oats or barley, and potatoes and cranberries, do as well as many who cultivate wheat?"

The Calceolaria.

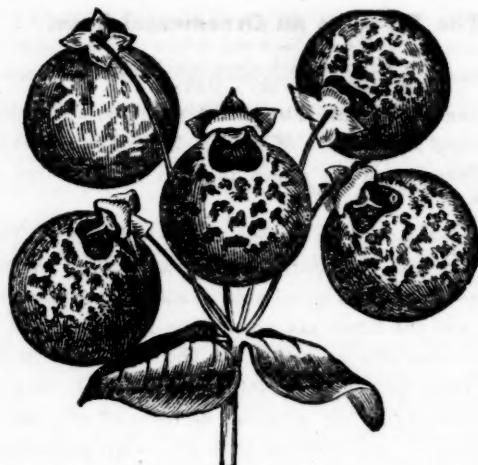
This interesting plant has much to commend it to the attention of the cultivators of flowers. Like the tulip, pansy, rose, phlox, &c., it runs into endless varieties, which quality of itself imparts great interest to any plant; and besides, its uniquely formed spotted, showy flowers, are highly ornamental. It is only a few years since it has attained a high rank among florists' favorites. Innumerable sorts have been raised from seeds, all, however, retaining the peculiarity of the original, of globular, spotted, blotched, or striped corollas; and like the breeders of fine animals, certain cultivators have been eminently successful in greatly improving their size and beauty. In a similar way, an unskilful hand will procure seeds of these highly improved sorts, and allow them to degenerate as fast as an unskilful raiser of domestic animals.

The varieties are comprised under two general heads, the herbaceous perennials, and green-house shrubs. The latter are most highly esteemed, although the former bear larger flowers.

In cultivation, the first thing is to procure a suitable soil in a well-drained pot,—well drained, because the plants at one stage grow rapidly, and consequently need copious waterings at that period, the surplus of which must drain off freely. The soil may be manufactured by taking two parts of good friable loam, one of leaf mold, one of thoroughly rotted stable manure, and one of coarse or fibrous peat—the latter for the purpose of rendering the whole porous for drainage. Thorough mixture of the whole is necessary, as well as the removal of the coarser with a sieve. This may seem like taking much trouble, but the best way is commonly the cheapest.

The seeds are usually sown after mid-summer, and at first need much attention. They must be very thinly and evenly covered with pulverised soil, over which a bell glass must be placed till they come up, and when watered it must be done through a very fine rose, that the water may fall like dew, and not wash the soil. Shading from the sun, by placing a white paper or cloth on the sunny side of the bell glass, will be requisite. When the seeds come up, they are, as they continue growing, successively separated or thinned out, and transplanted into pots, till large enough to remain in those intended for their permanent destination, which should be six-inch pots. Through the winter they will need the ordinary care of green-house plants, and should be watered sparingly; but on the approach of warm weather, when they recommence rapid growth, they will need a full supply of water. The amount given must be regulated by circumstances, as the state of the weather, rapidity of vegetation, &c.; on giving just enough, and not too much, depends much of the successful treatment of this plant. When the sun is hot, shading must not be forgotten.

The shrubby plants are propagated by cuttings or off-sorts. After blooming, the flower stalks are cut down, they are placed in shade, and growth encouraged. The young shoots or sprouts, even if quite small, will make

*The Calceolaria.*

good cuttings, which may then be placed round a pot, in contact with its sides, in a thin stratum of silver sand, and reaching down just far enough to touch the compost. This pot is put within another a little larger, and between them the lower rim of a bell glass is placed, to preserve uniform moisture. The cuttings will have struck when they recommence growth, until which time great care must be taken to preserve a constantly uniform moisture of soil. If intended to raise from off-sorts, the plants after pruning must be buried deeper for this purpose.

During growth, great care should be given to the habit of the plant, to prevent the too common weak and slender form, and to impart to them a full, round, and bushy appearance. The flowers, if good, will not be thin or flat, but a perfect, rounded, hollow ball,—they will form rich masses, without crowding, and the whole bloom should be one handsome bunch of pendent flowers, scarcely above the foliage.

A Valuable Grape.

L. TUCKER, Esq.—I observe in the August number of Mr. Barry's Horticulturist, page 387, "Will you please inform me whether there is any good kind of grape other than the Isabella and Catawba, that will grow in our cold northern climate? A. READER, New Athens, Pa."

I have a vine producing a grape of similar color to the Isabella, and it is more sweet and delicious than any Isabella I have eaten. In the winter of 1832, when the Isabella and most other vines were frozen and killed down to the ground, my vine suffered in the small shoots which ought to have been trimmed off, but the larger branches put out and bore fruit the following season. If you please, you may give this notice to Mr. Barry. Slips of round and sound wood, well ripened and of short joints, will produce good vines to bear grapes the second or third year. This I know by trial.
DAVID TOMLINSON. Schenectady, August, 1833.

Houghton's Seedling Gooseberry.

We see a statement going the rounds of the papers, quoted from the Connecticut Valley Farmer, that "Houghton's Seedling, so loudly applauded as mildew-proof with us, is no more exempt than "Roaring Lion," "Crown Bob," or any other variety." It is perfectly evident that the person who wrote this could have never cultivated the genuine Houghton. Out of hundreds of bearing plants, during the most unfavorable seasons, when Crown Bob and Roaring Lion were ruined by mildew, not one berry on any of the Houghton bushes had a speck of mildew upon it, and this is the general voice of cultivators in the Northern States.

The Grazier.

South Down Sheep.

Many of our readers are aware that it is the common practice of eminent breeders in England, to let, annually by auction, to the highest bidder, such male animals as they have to dispose of for the year. Among those lettings, that of Mr. JONAS WEBB of Babraham, the celebrated breeder of *South Down Sheep*, is one of the most attractive. His 27th annual letting was held at his place, on the 6th of July, at which were present several hundred gentlemen, including many from other countries; and among them, Mr. F. M. ROTCH of Morris, Otsego county, in this State, who, it will be seen, procured the favorite buck let on this occasion, paying therefor the handsome sum of 130 guineas, about \$650. We copy from the *Mark Lane Express*:

"The annual letting of Mr. Jonas Webb's celebrated tups took place on Wednesday, Mr. King officiating as auctioneer. The attendance was about as large as usual. The animals met with unqualified admiration; and one hired by Mr. Rotch, an American, fetched the astonishing price of 130 guineas, being the highest figure yet obtained by any single tup since Mr. Webb has commenced as breeder. There were 71 sheep let, which netted £1,580, being an average of £22 4s. Previous to the letting every animal has a reserved bid fixed upon it, by Mr. Webb himself, and it is but justice to that gentleman to say that every tup put up realized more than the price put upon it. Indeed, the aggregate produced £500 more than the reserve; one instance we might name, of a ram being fixed at \$5 5s. fetching £18."

At the dinner given on the occasion, at which the Earl of Hardwicke presided, Mr. ROTCH responded in a brief and appropriate manner to the customary toast—"The hirer of the highest prize tup of the day." Mr. WEBB, in proposing the toast, alluded to the fact that he had sold, some nine or ten years since, to the father of Mr. Rotch, one of his best rams for 50 guineas, (\$250.)

Product of Half-Blood Ayrshires.

MESSRS. EDITORS—From seeing an account of a widow's heifer named "Cherry," in the "Country Gentleman," pages 163 and 388, I am induced to give you a short statement of my heifer, "Cherry 2d."

Cherry 2d was three years old in May last—is a cross between a good native cow, and an "Ayrshire" bull raised by Mr. E. P. PRENTICE of Albany, N. Y. She dropped her first calf June 8th, 1853, and in ten days from the 14th, she gave 410 lbs. 15 oz. of milk, averaging 41 lbs. 1½ ounces per day. The last day of June she gave 39½ lbs. of milk, measuring 16½ quarts after it was strained, which made one pound four and a half ounces of butter—making eight pounds 15½ ounces per week, on grass only, and would have probably made more, if she had given as much milk on that day as usual. She gives as much milk now as at the time of trial. I intend you shall hear farther from her sometime.

I have also two four year old cows of the same blood, which stand only three feet 10 inches high, and weighed the first of this month, after driving four miles,

700 and 720 lbs., and gave during the same ten days, viz—from June 14th to June 25th, 411 9-16th lbs., 396 14-16th lbs. of milk; and the three have made, (after using milk and cream for a family of six persons, and also milk before it is soured to raise a calf,) to average three and three-fourths pounds of butter per day. Very respectfully yours. A. D. ARMS. *East Montpelier, Vt., July 16, 1853.*

Charcoal for Sheep.

One of the best medicines for human beings, is finely pulverised fresh charcoal, kept corked in a close vial or jar, one-half to a teaspoonful mixed with five times its bulk of water, forming an agreeable and excellent remedy for almost any kind of deranged stomach, and in larger doses constituting a very mild and perfectly safe laxative. There is no doubt that the same remedy would often prove of great service to domestic animals. Although we have never seen it tried, we confidently predict that half a pint to a pint of powdered charcoal, mixed with two to four quarts of water, would prove an admirable remedy for hoven in cattle. We observe that a correspondent of a late paper has used charcoal mixed with salt for his sheep, with the best results; he had found them, in accordance with usual experience, to suffer much on wet pastures, until he made use of this remedy, after which they immediately presented a more healthful appearance, and have continued to thrive, the salt as well as the charcoal operating beneficially.

Feeding Cattle around Stacks.

When a corner or knoll in the meadow is found to be in a poor condition, farmers often attempt to enrich such places by making a stack of hay on the ground, and foddering it out, expecting to reap a double benefit of improving the land, and saving the trouble of carting the hay and manure. Let us examine the arguments for, and objections to, this course of procedure.

The ground in this climate is always frozen in winter and covered more or less with snow, and consequently the liquid manure freezes upon the snow, and as the snow melts before the ground thaws and settles sufficiently to absorb the fertilizing qualities of the manure, the most valuable portion is lost entirely. The heavy rains drench the solid part of the manure, and alternate thawing and freezing destroy its strength, so that the soil is comparatively little benefited.

Another prominent objection is, that the cattle or sheep thus exposed in some bleak place, consume about one-fourth more food than would be necessary, if comfortable stables were provided for them, and they come out emaciated and sickly in the spring. Thus instead of securing a double profit in stacking the hay, a three-fold loss is sustained—namely, the better portion of the manure—a considerable portion of the hay, and in the condition of the stock. Cows, kept during winter in this way, require a long time to recover from the effects of exposure, and frequently the season is far advanced, and the grass becomes dry and less succulent, before they regain their flesh—thus very much lessening the profit arising from them.

True economy consists in keeping cattle in good condition with the least quantity of food, and in making and saving all the manure possible. Proper attention is not given to composting manure, for I still regard it as at the basis of remunerative farming. It is the great thing to make our farms fertile; for drouth or excessive rains do not injure a rich soil as they do starved land.

A single suggestion from your excellent paper has often been worth more than a year's subscription to me, and I have ventured to send these with the hope of contributing to the improvement of my brother farmers. An attentive reader, D.

Points of Excellence in Cattle.

Adopted by the N. Y. S. Ag. Soc'y, for the guidance of the Judges at their Annual Fairs.

AYRSHIRES.

PURITY OF BLOOD, as traced back to importations of both dam and sire, under such evidence as will satisfy committees. THE HEAD, as in other breeds, small; the face long and narrow; the muzzle and nose variable, 4
THE EYE placid and not strikingly large, 2
THE EAR of full size, and of an orange color within, 4
THE HORNS small, tapering, with an outward and upward turn, and set on wide apart; the face somewhat dishing, 2
THE NECK, of medium length, clean in the throat, very light throughout, and tapering to the head, 4
THE SHOULDERS lying snugly to the body, thin at their top, small at their points, not long in the blade, nor loaded with muscle, 6
THE CHEST must retain sufficient width and roundness to insure constitution. The lightness of the fore quarter, and the "wedge-shape" of the animal, from the hind quarter forward, arising more from a small, flat and thin shoulder, than from any undue narrowness of the chest, 12
THE CROPS easily blend in with so thin a shoulder and prevent all hollowness behind, 4
THE BRISKET not over-loading the fore end, but light, 4
THE BACK should be straight, and the loin wide, the hips rather high and well spread, 8
THE PELVIS roomy, causing a good breadth at what is termed the "thurl," or "round-bone," and between the points of the rumps, 4
THE QUARTERS long, tolerably muscular, and full in their upper portion, but moulding into the thighs below, which should have a degree of flatness, affording thus more space for a full udder. The flank well let down, but not heavy, 8
THE RIBS, behind, springing out *very* round and full, affording space for a large udder, which by Ayrshire breeders is considered very essential to secure the milking property; the whole carcass thus acquiring increased volume towards its posterior portion, 4
THE RUMPS nearly level with the back, projecting but little, 4
THE TAIL thin in its cord, of full length, light in its hair, and set somewhat farther into the back than would be admissible with some other breeds, 1
THE LEGS delicate and fine in the bone, inclining to be short, and well knit together in the joints, 3
THE UDDER in this breed is of more especial importance, as the Ayrshires have been bred almost exclusively with reference to their milking properties. The great feature of the udder should be capacity, without being fleshy. It should be carried squarely and broadly forward, and show itself largely behind. As it rises upward it should not mingle too immediately with the muscle of the thighs, but continue to preserve its own peculiar texture of skin — thin, delicate, and ample in its folds. The teats should stand

wide apart, and be lengthy, but not large and coarse,	12
THE HANDLING will show the skin to be of medium thickness only, moving freely under the hand and evincing a readiness in the animal to take on flesh, when a drain on the constitution is no longer made by the milkpail,	6
THE HAIR soft and thick, in the phraseology of the country, woolly,	4
COLOR, varies—a dark red, a rich brown, a liver color, or mahogany, running into almost a black; those very much broken and spotty at the edges on a white ground are the favorite colors at the present time. The light yellow is, however, a color sometimes found on very good cows, but these pale colors are objected to from an impression that such belong to animals of less constitution,	1
CARRIAGE should be light, active, and even gay; this latter appearance is much promoted by the upward turn of the horn,	1

100

POINTS OF THE AYRSBIRE BULL.

As regards the male animal, it is only necessary to remark, that the points desirable in the female are generally so in the male, but must, of course, be attended by that masculine character which is inseparable from a strong and vigorous constitution. Even a certain degree of coarseness is admissible, but then it must be so exclusively of a masculine description, as never to be discovered in the females of his get. In contra-distinction to the cow, the head of the bull, may be shorter, the frontal-bone broader, and the occipital flat and stronger, that it may receive and sustain the horn—and this latter may be excused if a little heavy at the base, so its upward form, its quality and color be right. Neither is the looseness of the skin, attached to, and depending from the under jaw, to be deemed other than a feature of the sex, *provided* it is not extended beyond the bone, but leaves the gullet and throat clean and free from dewlap.

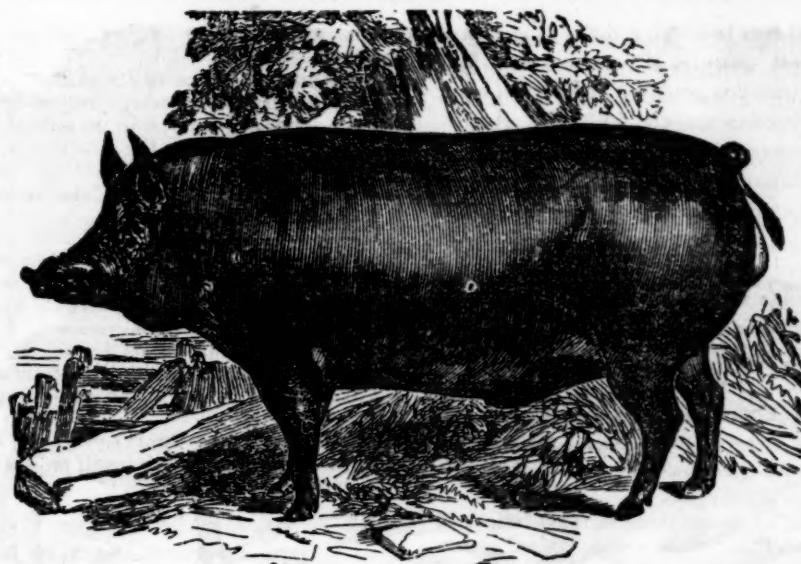
The upper portion of the neck should be full and muscular, for it is an indication of strength, power, and constitution. The spine should be strong, the bones of the loin long and broad, and the whole muscular system wide and thoroughly developed over the entire frame.

Fattening Sheep.

It is sometimes an object to fatten sheep rapidly in summer, and also to fatten off old sheep which cannot be readily fattened on pasture alone. In either case, good pasture and the feeding of a moderate quantity of grain daily, will generally effect it very advantageously. One bushel of grain fed to sheep in summer, will make as much fat as three or four fed in winter; hence they may be fattened off most rapidly, and with least expense, in summer and fall.—*Canfield.*

Kentucky Sheep.

The Frankfort Yeoman says, that a few days since Robert W. Scott, of that county, sold fifteen of his fine fat wethers at fifteen dollars each, after shearing from eight to ten pounds of superior wool from each of them. They are of Mr. Scott's new and now quite celebrated breed, which he calls "Kentucky Sheep," and which he has produced, during the last eighteen years, by judicious crossing with all the best imported breeds; having commenced originally with the common sheep of the country. They have large and symmetrical carcasses, are very thrifty and prolific, and yield heavy fleeces of medium wool, an exceedingly beautiful article that well deserves the premium of from 3 to 5 per cent. per lb., which it usually commands over the common wool of the country.—*Ohio Cult.*



Improved Essex Pigs.

Of this breed, one of which is represented above, SANFORD HOWARD writes as follows, in the Wool Grower and Stock Register:

This is one of the most valuable breeds now known. The establishment of the breed is generally credited to the late Lord Western. It has of latter years been extensively known in the hands of the noted breeder, W. Fisher Hobbs, of Marks-Hall, Essex. It has perhaps, carried more prizes at Smithfield, within the last ten years, than any other breed. As before mentioned, it was derived from a cross with the Neapolitan, and inherits the color of that race, with more size, finer symmetry, and much better constitution. Stephens, author of the Book of the Farm, and the Farmer's Guide, says: "As to the breed which shows the greatest disposition to fatten, together with a due proportion of lean, I never saw one equal to that which was originated by Lord Western, in Essex..... They were exceedingly gentle, indisposed to travel far, not very prolific, however, but could attain if kept on, to a great weight, and so compact in form, and small of bone and offal, that they invariably yielded a greater amount of pork than was judged of before being slaughtered. The offal was small, and more delicious ham was never cured than they afforded." Martin says: "These animals fatten quickly, grow rapidly, and yield very superior meat. The hogs, when fattened, will sometimes weigh 26 or 28 stones, (14 lbs.,) often 18 or 20,"—equal to 252 to 392 pounds.

The only animals of this breed in this country, with our knowledge, are in the possession of L. G. Morris, Esq., of Fordham, Westchester county, N. Y., or of persons who have obtained the stock of him. His first importation was made about a year since, and his last the past autumn. Some of these animals were procured directly from W. Fisher Hobbs, and were of that gentleman's best stock.

A variety of the Sussex breed is closely allied to, and may be identical with the Essex. Some of this variety were introduced into this country several years since by Mr. Henry Parsons, now of Guelph, Canada West. The writer of this article obtained stock from Mr. Parsons, and from the experience of several years, can say he never had any swine that gave more weight of carcass in proportion to the food consumed, and never any which equalled them in quality of meat.

There is a white, or nearly white variety of Essex. Specimens were imported by the late Mr. Stickney, a part of which are now in the possession of Mr. H. H. Williams, of Roxbury, Mass.

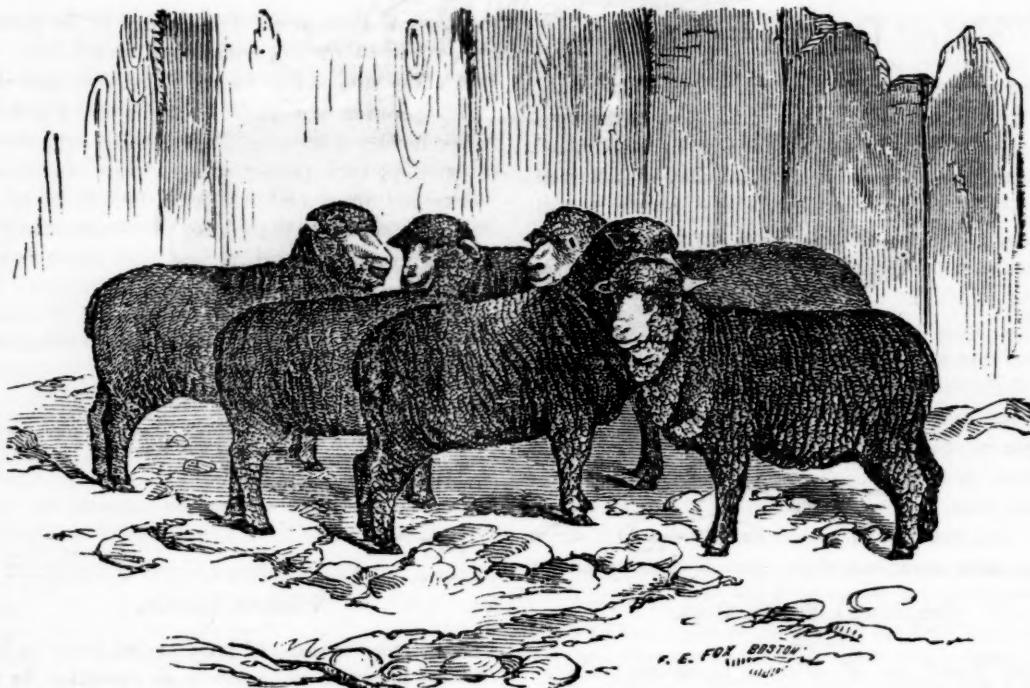
Vicious Cattle.

The common "vice" of jumping and throwing fences is taught to cattle, with scarcely an exception, by their owners and care takers. Fences half down, soon fall by the rubbing of cattle, and teach the first lesson, especially if cattle have any shrewdness in observing cause and effect; very fine feed just over a very poor fence, is the next lesson; letting down bars and rail fences to the halves from laziness, so that the animal has to take a leap, is the third lesson—and this last is often first, second, and third with sheep, until they will scale anything. These three lessons are usually quite enough, but a fourth is often added, namely, placing one additional rail on the fence each successive day, as they become more skillful, for the ostensible object of keeping the jumper within bounds, but really operating as a most ingenious contrivance to teach the art of vaulting. We have heard of French being "taught in six lessons;" but very few animals require more than the above four to enable them to take "French leave" of any ordinary enclosure.

Hoven in Cattle.

The practice of puncturing with a knife when severe cases occur of hoven in cattle, we have long been acquainted with, and know its safety and efficacy. As it is, however, very important to make the incision in the right place, we give the following directions, from the *Farming Mirror*, a new and useful monthly agricultural journal, just commenced at Lyons, N. Y. "Take a piece of twine, and hold one end on the most prominent point of the left haunch bone, the other end on a point formed by the union of the last rib with the spinal column or back bone. A point at equal distance from each end of the string will be the place to puncture. Use a sharp pointed knife, about three inches in length, and with sufficient boldness to make the incision at a single effort."

HOGS IN KENTUCKY.—Returns from fifty-seven counties in Kentucky show that there has been an increase of 123,000 hogs, over the same period last year.



SPANISH MERINO EWES, THE PROPERTY OF GEORGE CAMPBELL, WEST-WESTMINSTER, VT.

MESSRS. EDITORS—The above cut represents a daguerreotype view of a group of Spanish Merino Ewes, which are descendants from the original Spanish stock imported by Hon. Wm. JARVIS of Vermont, and Mr. HUMPHREY of Connecticut, more than forty years ago. They are about as large as is profitable for wool growing. The Ewes, when full grown, weigh from 80 to 100 lbs., and bucks from 125 to 150 lbs.

The great object which I have had in view in breeding this stock of sheep, is to combine a good form with a heavy fleece of fine wool.

Their wool is of a beautiful style, long, thick and fine, with a natural oil sufficient to form a dark surface, which is a strong indication of purity of blood. My yearling and two year old Ewes of this stock, sheared of less than one year's growth, an average of more than eight pounds per head of unwashed wool.

I have made a few crosses on this stock, with the Silesian Merino Ram, and find that it does not diminish the quantity, while it increases the quality 25 per cent.

Mr. SAMUEL WHEAT of Putney, used one of our Silesian bucks to his whole flock, which improved the quality, as well as increased the quantity more than 1 lb. per head. His yearlings averaged 6 lbs. 10 oz. per head, which readily sold at 60 cents per lb. Others in this vicinity, having used Silesian bucks, are equally well satisfied with their stock. GEO. CAMPBELL. *West Westminster, Vt., July 28, 1853.*

Mr. Campbell's French Buck "Matchless."

In the 29th No. of the Country Gentleman, and also in the Cultivator for August, we gave a portrait of what was erroneously stated to be a "Spanish Merino Buck," but which was in fact the portrait of a *French* Merino called "Matchless," imported and owned by GEORGE CAMPBELL, Esq., of West-Westminster, Vt., and Wm.

CHAMBERLAIN, of Red-Hook, N. Y. "Matchless," says Mr. Campbell, "is five years old—live weight 280 lbs.—fleece of one year's growth, in its natural state, about 25 lbs., and was from Mons. Cugnot's flock." The same gentlemen have recently received an addition to their former importations of sheep, by the ship Humboldt.

IMPORTATION OF STOCK.—We learn that the Southdown buck bid off by Mr. ROTCH, at 130 guineas, at Mr. JONAS WEBB's letting on the 6th July, alluded to in our No. 30—p. 55, was for JONATHAN THORN, Esq. Washington, Dutchess Co. We are also informed that Mr. ROTCH, in company with a son of Mr. THORN, has been engaged for some months in examining the best herds and stocks of England, for the purpose of selecting for Mr. THORN, the very best animals of different kinds, which can be procured, without regard to price; and that they have purchased quite a number of those which received the premium at the show of the Royal Ag. Society on the 11th of last month. They will also attend the sale of the stock of the late Earl DUCIE, which is to take place on the 24th and 25th of this month, where they will probably become large purchasers. Their purchases, while abroad, will include horses, cattle, sheep, fancy poultry, rabbits, &c.

CHEAP SHEEP.—In a work entitled "Two Thousand Miles' Ride through the Argentine Provinces," the author, Mr. McCANN, in speaking of Mr. Handy, an Irishman, at whose house he stopped at night, says: "He had lately been in the South buying sheep, where, by good management and a little patience, he obtained eight thousand, at eighteen pence per dozen!—four copper reals each."—*Panama Herald.*

BLACK LEG.—In answer to an inquiry for remedy for black leg in calves, E. BURNHAM states in the Ohio Cultivator, that feeding salt once in two days has proved successful. If they are fed as much as they will eat, not less than once in two days, the remedy is certain.

Notes for the Month.

ATKINS'S SELF-RAKING REAPER.—This machine was in successful operation on the farm of B. B. Kirtland, Greenbush, on Wednesday and Thursday of last week, and elicited the approbation of every one who saw it. It is impossible to convey in words any idea of the mechanical construction of the raking attachment. The cutting apparatus does not differ materially from that of other reapers, but at regular intervals an arm, to which a rake is attached, extends itself to the farther part of the apron, slowly draws itself the length of the apron pressing the grain against a plate, where it holds it till it swings around a quarter of a circle, clear of the machine, and coolly deposits its neat sheaf on the ground, when it immediately returns to repeat the process. The machine is not of heavier draught, apparently, than other machines—and it does its cutting fully equal to any reaper we have seen work. While it has no superior as a practical thing, it is a curiosity worth quite a pilgrimage to see. It comes the nearest to being instinct with life, and manifesting signs of intelligence of any piece of mechanism, not excepting the steam engine. The advertisement of the agent, J. S. WRIGHT, may be found in another column.

AGRICULTURAL EDUCATION.—A correspondent of the Geneva *Courier*, proposes to convert the Medical College of Geneva, into an institution for instruction in the science of Agriculture. His proposition, as we understand it, is to appoint four professors on Agriculture and the sciences particularly connected therewith, who are to lecture during the winter months, thus enabling the sons of farmers who work at home during the summer, to devote the time during which they can best be spared from the farm to the study of the general principles of agriculture. This plan is the same in character as that contemplated by the University of Albany, and which, but for the unfortunate and lamented death of the late Prof. NORTON, would have been carried into effect. Believing that such a plan was best adapted to supply the present wants of our farmers' sons, we earnestly desired to see it carried into effect here, and we shall greatly rejoice if the trustees of the Geneva College or any other institution in the State, shall make provision for suitable courses of lectures for our young farmers during their seasons of leisure. It would afford facilities for instruction and improvement, now nowhere to be obtained, and which, we doubt not, would be appreciated by the agricultural community.

EMERY'S MOWING MACHINE.—Since the trial of mowers at Greenbush, Mr. Emery has succeeded in simplifying his machine, so as to render it more compact, more easily managed, and more readily adapted to uneven surfaces. This has been done by removing the forward wheels and balancing the machine on the driving wheel, at the same time retaining all the advantages of the hollow-knife-bar, crank axle, and the arrangement of the cutter. The machine has been in use the past week, and will, we predict, become one of the

most valuable mowers. The change in its form does not prevent its working equally well as a reaper.

Mr. HOWARD, of the Boston Cultivator, says of it—“Its operation was decidedly improved, especially as to the facility of turning. The cutting apparatus appears to be very perfect, and its work was done in a manner not to be excelled. With some further modifications in reference to avoiding its side draft and simplifying its management, it may take the field in fair competition with the best.”

TOWN AG. SOCIETY.—The Annual Cattle Show of the Cape Vincent, (Jefferson Co.) Ag. Society, will be held on the 8th of September.

TANNIC ACID FOR STRAWBERRIES.—In an article on the culture of the strawberry, in a recent number of a New-York Journal, we find the following:—

“Scientific cultivators have applied tannic acid to their beds, and have expressed their full conviction of its value as a fertilizer. Messrs. Hovey and others have ridiculed the application without, as it seems to us, presenting any very satisfactory experiments to back up their opinions. They attribute the increased size and the improved flavor of the berries to the water in which the tannic acid is administered to the plants, rather than to the tannin.”

We should be glad to know what “scientific cultivators” have applied tannic acid to their strawberry beds. That spent tan-bark has been used as a mulch for strawberry beds, and with the best effect, we know,—also that such beds have been freely watered with a liquid consisting of “one gallon of tan-bark liquor to one hundred of water,” with a good effect, we do not doubt; but that there was any tannic acid in the spent tan or in the tan-bark liquor remains to be shown. If we mistake not, the authority for this statement is the same as that which proclaimed that “toads were very fond of strawberries, and select the best for their own eating,” and that there is just as much proof of the one statement as the other.

COMSTOCK'S TERRA-CULTURE.—I am more than ever convinced that Comstock's system is not a humbug, and I know that there is not one farmer in ten, and I think not one in one hundred, but what violates his laws (which I believe are the laws of nature,) in cultivating corn and potatoes, and most other crops. I have done more than most, I think, but all who I knew, do it more or less. If he says “nothing more than all well informed men know,” I have never seen the operations of a well informed man in a potato field. If any one pretends to give his secret, he had better hand it over so as to benefit the world. I don't advise any man to break his honor; but I don't like to have it go out that all the secret is out when nothing of much benefit is before the public. How is it with corn, potatoes, rye, wheat, oats, &c.? My corn looks well, potatoes very good, &c. I must still believe that his system is a law of nature, as plain as the “nose on a man's face,” only it has escaped our notice. DAVID LYMAN. Middletown, Conn.

ROSENDALE CEMENT.—This Cement can be procured of W. R. BARRETT, No. 120 Pier, Albany—price \$1.37½ per barrel.

Queries for our Correspondents.

BEST COWS FOR MILK—Which will make the most butter, in proportion to the cost of keeping, the "Ayrshires" or the "Short-Horns?" A. D. ARMS. *East Montpelier, Vt.*

POULTRY—Will you or some of your correspondents publish through the columns of your truly valuable journal, "The Cultivator," the best mode for the management of a small flock of hens on a farm, say 50 or 60—and the best plan for building a roost—also which are considered the best layers. S. W. J. Hyde, N. Y., July 20, 1853.

MULTICOLE RYE.—Can you or any of your correspondents tell me where I can get some of the Multicole Rye and at what price? C. C. Huntley Grove, Ill.

TAR AND FELT ROOFING.—I shall be greatly obliged if you, Messrs. Editors, or some of your correspondents, will give me a specific receipt for the ingredients composing what is termed Tar and Felt Roofing. F. N. C.

DISEASE IN CHICKENS.—My chickens have a disease which they have never been afflicted with before, and which baffles all treatment. They commence to shake and stagger, and soon are unable to follow the hen; and about the second day they are unable to walk, and lie down on one side, and have no power in their legs at all; they eat as readily as when well, but do not drink so freely. Would some of your numerous correspondents inform me what the disease is, and what is the remedy? A SUBSCRIBER. *Juniata Co., Penn.*

ARTESIAN WELLS.—Will you please to inform me as to the implements used, and manner of using, to make Artesian Wells? If proper, I would ask for a drawing of the implements, or so much that I may understand the process. S. REYNOLDS. *Lockport, N. Y.*, Aug.

Answers to Inquiries.

SOWING CLOVER.—Will you inform me through the Country Gentlemen or Cultivator, if it will answer to sow red clover seed in the fall? C. C.

At the north, it fails in consequence of the action of cold and the heaving of frost combined, and the young plants if of late autumn growth only, do not become strong enough to resist both of these influences. If sown early in autumn or in summer, the seed or plants are apt to fail from hot sun and drouth. We have repeatedly sown clover early in spring and covered it with a brush or light harrow, without allowing any other crop to occupy the ground, and had a fine luxuriant growth before mid-summer.

STEAM APPARATUS FOR COOKING FOOD FOR HOGS.—In answer to an inquiry of one of your readers, who asks information relative to the best mode of erecting a steaming apparatus for cooking food for hogs, I beg leave to state that I have used a barrel placed on the lid of a boiler in which cows' feed was being prepared. The barrel requires to be tight, with five or six auger holes bored in the bottom of it, with a similar number in the lid on which it is placed, having the holes in the

barrel and lid opposite each other; then a lid for the top of the barrel, with a few auger holes of smaller dimensions than those in the barrel and lid, and the apparatus is complete.

The barrel I used contained three and a half bushels potatoes, which were steamed quite to my satisfaction without any extra fire over that which the cows' feed in the boiler, over which they were steamed, required.

It will be necessary to nail a rhind of cloth around the bottom edge of the barrel, to prevent the steam from escaping; and the water in the boiler must not be so high that it will enter the holes in the lid when boiling. I have not used it for steaming anything but potatoes. J. G. Milwaukee, 18th July, 1853.

A SUBSCRIBER, Sing-Sing.—The falling of your plums is occasioned by the curculio. For directions as to a remedy, see any of the numerous articles which have appeared in this paper, on the Curculio.

C. L. R., Fairfield.—I have a very fine thoroughbred Shepherd dog, good size, and every way desirable, which I will dispose of at a reasonable price. Think others may be obtained here. E. S. DANA. Middlebury, Vt.

CRANBERRIES ON UPLAND.—So far as my experience goes, and so far as I am acquainted with that of others, the Cranberry will not succeed except on low and wet places, this being its natural situation. A very good way to grow them in an artificial way, is to excavate a place, the size of the bed required, one foot deep, and fill it up with peat or bog mold, this being the soil it does best in. Means should then be insured to supply them with plenty of water, either by a stream, a pipe from a pump, or an hydraulic ram. The supply should be liberal. By this means a supply of cranberries may be obtained in any place; and where no opportunity exists to grow them naturally, it is almost useless to attempt to grow them without this preparation. Cuttings from the old or young wood will take root, with or without heat in a frame, and if planted out two feet apart will soon fill the bed. Dung or garden mould is peculiarly injurious to this plant, and should on no account be used. EDGAR SANDERS. Albany, July 26, 1853.

Highland Nurseries, Newburgh, N. Y.

A. SAUL & CO., in calling the attention of their patrons and the public in general, to their very extensive stock of FRUIT AND ORNAMENTAL TREES, SHRUBS, &c., &c., which they offer for sale the coming autumn, would remark, that owing to the past summer being one of the most favorable for the growth of trees, which they have had for many years in this locality, their stock of *trees and plants*, in every department, is larger, more thrifty, and in every respect finer than usual.

To particularize within the limits of an advertisement would be impossible, they therefore refer *planters* and *dealers* of trees to their catalogues, a copy of which will be sent by mail to all *post paid* applicants for the same, on enclosing a post-office stamp.

They invite especial attention to their assortment of *Standard and Dwarf Pear and Cherry trees*, which are unusually fine, as well as Plum, Peach, Apricot and Nectarine; also *Grape Vines*, *Goosberries*, *Currants*, *Raspberries*, *Strawberries*, &c., &c., in any known variety.

500,000 very strong two year old *Osage Orange* plants, in three sizes, at \$10, \$8, and \$6 per thousand.

Buckthorn plants, \$8 per thousand.

Newburgh, N. Y., Sept. 1, 1853—m2t

Syracuse Nurseries—Syracuse, N. Y.

THORP, SMITH, HANCHETT & CO., particularly invite the attention of Nurserymen, Venders, and Planters, to their immense stock of trees of every description, being of unusually fine growth.

Standard Fruits of Apples, Pears, Cherries, Plums, Peaches, &c., for orchard planting, vigorous, stocky, and well formed.

Dwarf and Pyramidal Pear Trees, on the best *Angers* or *French Quince Stocks* (embracing every good variety that will work well,) 2 years old, very beautiful, vigorous, and well formed.

Dwarf Cherries on Mahaleb Stocks, 1, 2, and 3 years old trees, finely formed and handsome.

Gooseberries, Currants, Raspberries, &c.—Our stock consists of the choicest varieties, including the new celebrated sorts.

Grape Vines, of all the hardy sorts, with some 40 foreign varieties, grown in pots from single eyes.

We would particularly request persons who are desirous of purchasing, to examine the above trees, as they are not only worked on the best stocks that can be procured, and grown in good soil—but they are stout, stocky, and vigorous, maturing their wood early in the fall; and as we pay the most strict attention to our trees, during every stage of their growth, we feel that no stronger guarantee of accuracy can be given in this respect.

Ornamental Trees—Such as Horse Chestnuts, Sugar and Silver Maples, Elms, Black Walnuts, Silver Abeles, Tulip Trees, &c., we have very large and fine for street planting.

Shrubbery.—A splendid collection, containing everything new and rare.

Roses.—One of the largest collections in the country, including all the novelties. Also the celebrated "Augusta" Rose, which has given such universal satisfaction the present summer.

Bulbous Roots.—We are now receiving from Holland by steamer, a splendid importation of Bulbous Roots, comprising all the choicest varieties.

Green-house Plants, Fuchsias, Pompon Chrysanthemums, Verbenas, Dahlias, Strawberry and Hedge Plants, &c.

All orders strictly complied with in every respect, and articles packed in the best manner for transportation to any part of the United States. For further particulars see Catalogues.

No. 1. A general Descriptive Catalogue, combining Nos. 2, 3, and 4, in one volume.

No. 2. A general Descriptive Catalogue of Fruit Trees.

No. 3. A new Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, Flowering Plants, &c.

No. 4. A Descriptive Catalogue of Dahlias, Verbenas, Chrysanthemums, Geraniums, Fuchsias, Bedding out and Green-house Plants. Also a wholesale Catalogue or Nursery trade list. The above Catalogues will be sent gratis to all applicants, (post-paid,) enclosing for the wholesale list one penny stamp—for No. 1 a letter stamp—and Nos. 2, 3, and 4, two penny stamps each.

THORP, SMITH, HANCHETT & CO.
Sept. 1—m1t—w37, 38, 39.

Great Auction Sale of Trees, &c.

WM. R. PRINCE & Co., Proprietors of the Linnean Garden and Nurseries, Flushing, intend selling at Auction their immense stock of Fruit and Ornamental Trees and Shrubbery, of all sizes, about the 1st October next, the ground being wanted for Building lots. This is the best opportunity ever presented for new Nurseries to obtain full supplies, and for older ones to fill up deficiencies. Complete Catalogues and further information will be sent to all who wish to attend the sale.

Sept. 1—34—1t—m1t.

Geneva Nurseries.

THESE Nurseries are located just half way between Syracuse and Rochester, being fifty miles from each place, and the facilities for shipping trees are equal to any in the State. Our stock of trees is now extensive:

30,000 Cherry, 1 to 3 years old.

30,000 Peach, 1 year old.

6,000 Plum, 1 year old.

15,000 Apple, 1 to 5 years old.

5,000 European Ash, (Mountain) large size.

6,000 Horse Chestnut, (large,) with a general assortment of other trees.

STOCKS FOR NURSERYMEN.

500,000 Apple, 1 and 2 years; 25,000 Pear, 1 year; 25,000 Cherry; 10,000 Plum; 5,000 Sweet Briar, 1 year from seed; 5,000 Mountain Ash; 50,000 Asparagus Roots; 50,000 Osage Orange, 1 and 2 years; 20,000 White Cedar; 5,000 Balsam Fir, 1 to 4 ft.; 2,000 Sugar Maples; 2,000 Hemlocks; 6,000 Norway Spruce; 120,000 Basket Willow.

Geneva, Sept. 1, 1853.—m1t* W. F. & E. SMITH.

Fruit and Ornamental Trees, &c.

THE subscribers have the pleasure of announcing an immense stock of trees, &c., for the autumn trade—embracing

*Standard Trees for Orchards.**Dwarf and Pyramidal Trees for Gardens.**Ornamental Trees* for streets, parks, and pleasure grounds.*Rare and Beautiful Lawn Trees.**New and rare Weeping Trees.**Evergreen Trees*, embracing the rarest species of Pines, Firs, Spruces, Yews, Cedars, Junipers, &c.*Hardy Flowering Shrubs.*

Roses, of all classes, and embracing the newest and best sorts.

Dahlias—the finest English prize sorts.

Chrysanthemums—including the finest of the new Pompeian varieties.

Phloxes and Peonies—superb collections.*Bedding Plants*—a complete assortment.

Bulbous Roots—just imported from Holland, and of the finest quality.

*Hedge Plants.**Box Edging.**Rhubarb, Asparagus, &c., &c.*

The favorable season has given everything a vigorous and fine growth. All orders, whether for large or small quantities, executed with the greatest care, and in strict compliance with the wishes of the purchaser. Packing done in the most secure and skillful manner, so that parcels can be transmitted thousands of miles with safety. Nurserymen and dealers in trees, will be supplied on the most liberal terms.

The following Catalogues are sent gratis, and prepaid to all who apply and enclose a postage stamp for each.

No. 1. Descriptive Catalogue of Fruits.

No. 2. do do Ornamental Trees, &c.

No. 3. Descriptive Catalogue of Dahlias, Green-house Plants, &c.

No. 4. Wholesale Catalogue.

ELLWANGER & BARRY,

Mount Hope Nurseries, Rochester, New-York.

Sept. 1—33—3t.—m1t.

Geo. H. Cherry & Co.,

River-Bank Nurseries, Rochester, New-York,

OFFER for sale a large assortment of FRUIT TREES of all kinds. The Trees are well grown, healthy and vigorous, and none other will ever be sent out. In addition to the above we offer, by request, a part of our young stock for transplanting, comprising—

100,000 Apples, 1 year from graft.

35,000 do 2 years from graft.

15,000 Cherries, 1 year from bud.

5,000 do 2 years from bud.

with Dwarf Pears, Peaches, Plums, Apricots, &c.

Nurserymen desiring such stock, will find the above well worth their notice.

Orders for Trees are solicited, under a strong persuasion that we shall be able to give satisfaction. No pains will be spared to secure the confidence of the public.

GEO. H. CHERRY & Co.,

River Bank Nursery, North of St. Paul-street, Office 106

State-street, Rochester, N. Y.

Aug. 18—w1tm2t.

SAMUEL MOULSON,

At the Old Nursery, Office 36 Front Street, Rochester, N. Y.

I S prepared to furnish inventories to post paid applicants, consisting in part of—

120,000 dwarf and standard pear trees.

90,000 Apple trees.

50,000 Peach trees.

30,000 Plum, cherry, and apricot, over 100,000 hardy evergreens, and a fine selection of weeping deciduous trees, ornamental shrubs, hybrid perpetual roses, together with such novelties as may be classed strictly hardy. Also a very limited assortment of half hardy, small size, such as *Cryptomeria Japonica*, *Cedrus Deodara*, &c.

The amateur wishing prime fruits of well established repute, or the agriculturist needing fine cropping thoroughly tested varieties, may rely upon the most careful execution of their orders.

The ornamental items are entirely grown in the Nursery; consequently none of the heavy losses are sustained that usually occur to recently imported subjects.

The evergreens are very robust, and admirably furnished to the surface of the ground, ~~now presenting the naked stems~~ usual to imported plants.

Dealers are invited to give a call before making their purchases.

September 1—m1t.

Premium Strawberries.

W.M. R. PRINCE & Co., Flushing, will send their Supplement Catalogue for 1853 and 1854, comprising the choicest collection of Strawberries in the Union, many of which are entirely new, and in no other collection. They are described in the April and May numbers of the Hort., and are free from any spurious admixtures, including the New Ohio varieties which are so often in a mixed state. The prices will be the lowest at which they can be anywhere obtained, and they will be packed so as to ensure their safe conveyance.

Applications for Catalogues to be post paid and enclose stamps.

Sept. 1—31—1t—m1t.

Osier or Basket Willow.

THE subscriber will have for sale, to be delivered this fall or next spring, about 50,000 Willow Sprouts of the growth of this season, suitable for propagation or for baskets. Each sprout will make from four to five cuttings for planting.

C. N. BEMENT, 341 Broadway, Albany.

Aug. 11—w1am4m.

North River Agricultural Warehouse.

No. 53 Courtland Street, New York.

GEOGE H. BARR & CO., invite the attention of Farmers, Planters and others, to their large and varied assortment of Agricultural Implements, Manures, Seeds, &c., &c., all of which will be furnished at the lowest prices. Their assortment includes

PLOWS—All the improved kinds by the most approved makers.

HORSE POWERS—Of all kinds and sizes, with and without Thrashers, &c.

CORN SHELLERS—All the approved kinds, and some of recent introduction.

STRAW CUTTERS—Of all sizes and kinds, for hand and horse-power.

CORN AND COB CRUSHERS—Of all kinds and sizes.

FANNING MILLS, Cultivators, Harrows, Agricultural Barometers, Churns, of all the approved kinds, Rakes, Hoes, Forks, and a general assortment of Horticultural and Garden tools.

Sept. 1—m2t.

Emery's Hay Press.

IN the August number of the Cultivator, appears an advertisement of a new firm, just formed, for an improved press, and alluding to my notice in a previous No. of the Cultivator, in no very flattering manner, which requires an explanation from me. Some years since, Mr S. W. Bullock, New-York city, 208 Broadway, patented an upright progressive lever press, and as a stationary and powerful machine it has no equal, and is in most general use on the Hudson River. Subsequent to this, Mr. Dederick combined two of Mr. Bullock's levers in the same press, and, as I learn, patented and introduced his improvement or new arrangement—not, however, without much difficulty and litigation with the owners of Bullock's patent, and, as I learn from them, have already paid upwards of \$1000 damages and costs for his infringements, and "the public are cautioned, under date of 1852, by the owners of said patent, not to purchase of Dederick or his agents except at their own risk, as they are determined to follow him up and to prosecute for every violation of their rights."

This is all the patent Mr. Dederick can boast of, to my knowledge. As to the origin of a Horizontal press, it is well known to a great number here, that I designed a portable horizontal press, and long urged the said Dederick to take hold and get it up for me—offering every facility possible to aid him,—(he insisting it was impractical). After nearly two years, he commenced and got up a model and a full sized press with our aid, and, as was supposed, for Emery & Co.'s exhibition at the State Fair in 1852, when to their astonishment, the press was left unfinished, and he enters the model at the fair as his own, and was awarded a complimentary medal, there being no premiums or competition for presses. Upon this beginning, a few presses were made, only two of which were furnished to Emery & Co., which two, as well as the others made that season by Dederick, broke and failed, causing much expense and disappointment. Since then, Emery & Co. have made large numbers after the original plans, substituting iron tension braces in place of heavy timbers, and light braced followers, working easily, and stronger than as made before, giving uniform and full satisfaction. They are offered at the lowest paying prices, and warranted superior as a portable and powerful press to any others in use.

H. L. EMERY.

Albany, August 16, 1853.

Hickok's Patent Improved Cider Mill and Press.

WE have been appointed sole agents of this Mill and Press in the city of New-York. This is the most approved mill now in use. Catalogues, with description and drawing, will be forwarded by addressing us, post-paid.—Price \$10. LONGETT & GRIFFING, July 22—30—St—m2t No. 25 Cliff-street, New-York.

Devon Cow for Sale.

FOR sale a thorough bred Devonshire Cow, at the low price of \$65, half her actual value. All applications should be directed to C. REAGLES, Union Gardens and Nurseries, Schenectady, N. Y.

For sale cheap, 40 pure bred Shanghai fowls from 2 months to 1 year old, comprising White, Buff, Black, and Dominique colors—also 6 fine Black Spanish chickens. September 1—m2t.

Country Residence.

FOR sale, a most desirable Country Residence, containing about twelve acres of land—sandy loam—in a high state of cultivation, within three quarters of a mile of the principal business street in the city of Schenectady. On the premises is a large house 24 feet front by 70 in depth, replete with every necessary convenience; attached to the same, are all the necessary barns, out-houses, &c. The garden contains a large number of choice fruit trees, consisting of Apple, Cherry, Pear, &c.; also number of evergreen and deciduous Ornamental Trees, together with a large quantity of Grape vines, Roses, new and rare Shrubbery. The fences are mostly new, and the house is in good repair, and has recently been fitted up as a residence for the proprietor, but other engagements render it necessary to dispose of the same. Price \$2,500—less than the actual cost of the improvements. Possession given immediately; title perfect. Inquire of C. REAGLES, Union Gardens and Nurseries, Schenectady.

September 1—m2t.

First Great Annual Sale

Of Durham and Dairy Stock, in Westchester County, New-York, by JAMES M. MILLER, on the farm of JAMES BATHGATE, Esq., one mile from Fordham, and 14 miles from the City Hall, New-York City, by the Harlem Railroad, cars running hourly, will take place on the

20th Day of September, 1853.

HAVING been solicited by numerous Cattle-breeders, in my native County of Westchester, to get up a sale in which all may participate to any desired extent, whether wishing to sell one or more animals, and my old friend, James Bathgate, having kindly consented to give the use of his spacious premises upon which to make the first experiment, I have made the above announcement, and now invite all persons having high-bred and grade Cattle for sale, either in this or adjoining states, to participate in the advantages offered.

The name and full description of Animals intended for sale, with the owner's name and residence, must be sent to my office, No. 81 MAIDEN LANE, New-York, before the 12th of September next, to be inserted in the Catalogue, which will be ready for delivery on the 15th of September; and the Cattle must be on the ground before 10 o'clock on the day of sale, or the evening previous, if possible, which will commence precisely at 12 o'clock, rain or shine.

The charge for selling, including all charges for advertising, Catalogue, Commission, &c., will be Five Dollars per head, except when special bargains are made for calves or low priced animals.

None but Cattle of well-known breeds of established character, will be received, and every animal offered must be sold without reserve.

If the experiment is successfull, a sale will be held every year, at some convenient point, making a GREAT FAIR for the farmer and improved stock breeder.

To those who know me, it is needless to say I have sold more blooded Cattle than any other man in America; and to others it is a sufficient guarantee that the proposed sale will be fairly and honorably conducted.

JAMES M. MILLER, 81 Maiden Lane.

Sept. 1—m1t—w3t.

Agricultural Books

THE Transactions of the New-York State Agricultural Society, vols. 1 to 9, for sale at the Office of "THE CULTIVATOR," price \$1 per vol.

Super-Phosphate of Lime—C. Deburgh's No. 1.

WE are the only authorized agents for the sale of Deburgh's Super-Phosphate of Lime in the city of New York. As there has been various spurious substances sold last spring for this superior manure, we request farmers and dealers to send their orders direct to our warehouse. We have sold about 300 tons this spring, and have received information from many that it was equal to guano in its immediate effect, and much more lasting in the land.

Any person who purchased from us Deburgh's Super-Phosphate last spring, which has not given satisfaction, by sending us notice, we will forward another lot for trial, without charge.

LONGETT & GRIFFING,
State Agricultural Warehouse, No. 25 Cliff-st.
New York, Aug. 11—w8t—m1t.

Super-phosphate.

NO expense has been spared in the combination of this most fertilizing manure, which contains the natural properties of plants. It is superior to most of the articles offered for sale under the same name, and is inferior to none, although sold at a much lower price. It is put up in bags, at \$10 per ton, of 2000 lbs., cash.

Office of the New-York Super-phosphate Manufacturing Company, No. 159 West-street, New-York.

Aug. 18—w11—m3t VICTOR R. KNOWLES, Agent.

Manures.

PERUVIAN GUANO, Imp. Super-phosphate of Lime, Bone Dust, Bone Black, Sulphuric Acid, Potash, Pourette, Plaster of Paris, Charcoal, &c., &c., for sale by

GEO. H. BARR & CO.,
Sept. 1—m2t. 53 Cortlandt St., New-York.

Farmers, Attention!

THIS is the proper season to use LEINAU'S AMERICAN FERTILIZER upon your farms. This truly valuable manure can be had at \$25 per ton, or \$3.50 per barrel, of the proprietor. Try it. It is now on exhibition at the Crystal Palace, New-York, and any amount of names can be given of its successful use. Also, Guano and Pourette, Phosphate of Lime and Aqua Ammonia.

G. A. LEINAU,
Aug. 18—m3t. No. 19 South Front-st., Philadelphia.

Bone Dust Manure and Super-Phosphate of Lime.

THE EAGLE CHEMICAL CO., having recently made extensive additions to their works on Staten Island, are now prepared to meet the increased demand for the above named invaluable manures, and are ready to supply the agriculturists with any quantity that may be required.

The *Bone Dust Manure* will be of the same quality, and will be delivered at the same price as that heretofore furnished to the farmers of Staten Island, New-Jersey, and other parts of the United States. It will be ground into a fine powder, and warranted pure—and being perfectly dry, and well packed in clean barrels, can be transported at a small cost, either by steamboat or railroad.

The advantages of ground bones for manure are too well known by the experience of the past twenty years, to make any further recommendation necessary.

The *Super-phosphate of Lime*, or Sulphated Bones, may not, perhaps, be so well known in some parts of the United States, as the former, as it is a comparatively recent mode of applying the same ingredients; but from the great results already obtained by the agriculturists in England and the United States, it is likely to be preferred to all other manures in use.

The proprietors of the *Eagle Chemical Works* have for several years past been engaged in the manufacture of this article in England, where they have had the assistance of the most eminent agricultural chemists in Europe.

The *Super-phosphate* now prepared by them, has been tested on every variety of soil and crop in Europe, the United States and the West Indies, with the most invariable success. The manufacturers do not hesitate to guarantee it to be the most perfect manure that can be made. No ingredients will be used until they have been carefully examined and their purity tested, and the mode of preparing such ingredients, and the proportions used, will be such as the manufacturers have ascertained, by long and patient application of chemical science to be the most perfect, and which they have proved to be so, by the practical tests of agriculturists on almost every description of soil, and in every variety of climate.

It will always be kept at the highest standard of purity and excellence, and every lot made will be carefully analyzed and tested before delivery. It is warranted to prove a more valuable manure than the best Peruvian guano, being both more immediate in its effects upon the plant, and of more per-

manent benefit to the soil, besides being less dangerous in its application.

It will be composed entirely of Super-phosphate of Lime, combined with such proportions of ammonia and other ingredients as are necessary to restore that which has been taken from the soil by previous crops.

Raw bones, in addition to fat or gelatine, are composed of Phosphoric Acid and Lime combined, called Phosphate of Lime. It is the *Phosphoric Acid* that is of great value as manure to the agriculturist, and the object of applying sulphuric Acid to dissolve them is that by its alliance with the Lime which is in the bones the *Phosphoric Acid* is rendered more soluble or easily dissolved by rain; and the difference between raw ground bones and dissolved bones may in a plain way, be stated to consist in the fact, that by a careful addition of the proper proportions of sulphuric acid, the Phosphate of Lime in the raw bones is converted partly into Sulphate of Lime, which is a valuable manure, and a considerable portion of soluble phosphoric acid is left free to combine at once with the soil in readiness to act on the plant.

Thus it is that a small quantity of Super-phosphate of Lime will force a crop of turnips in greater weight than a larger quantity of raw ground bones, bringing them ready to the hoe at least ten days sooner. This is one of the most important properties of this Phosphate, derived from its peculiar preparation, and it will always be found, where used, to cause such a speedy development of the plant, as to enable it to escape the ravages of the fly and wire worm.

It is calculated that one bushel of this prepared Super-phosphate is equal in its effects to six bushels of ground bones in a raw state. Thus the concentrated form of this manure, and its small bulk makes its exceedingly convenient, and diminishes the cost of transportation and handling. 250 pounds to 350 pounds to the acre is sufficient for any ordinary condition of soil, and the whole cost will not probably be greater than the extra expense would be in the mere handling and carrying the necessary quantity of stable manure to produce the same effect.

It may be sown broad cast, and plowed into the soil—or it may be drilled in with the seed. It may also be applied in the hills during the cultivation of corn or other crops, when it will stimulate the most sluggish growth into immediate action.

It will be delivered in Bags or Barrels, in such quantities as may be required, at the price of 2½ cents per pound—and each package will be branded—Super-phosphate of Lime, Eagle Chemical Works, 62 Beaver Street, New-York.

Orders with cash, or satisfactory reference, to be sent to
ALFRED F. KEMP, 62 Beaver Street,
New-York, Office of the Eagle Chemical Works.

Atkins' Self-Raking Reaper.

THIS machine is now offered to the public and warranted to be a good self-raking reaper. It is also believed to be a good mower, but not yet having been sufficiently tested in grass (though it soon will be) it is not warranted to be equal to a machine made mainly or wholly to mow.

The raking apparatus is of novel and very simple construction, and not liable to derangement, and every farmer who has seen it in the harvest field, says it performs the raking better than a man can possibly do.

Price of machines at Chicago, \$175, of which \$75 must be paid on giving the order, \$50 upon successful trial, and \$50 in note payable 1st December.

The machines are most thoroughly built and warranted.
Descriptive circulars, with cuts, sent to post-paid applications.

J. S. WRIGHT.
"Prairie Farmer" Warehouse, Chicago.
June. 1853—25—w13—m3t.

To Flax Growers.

THE subscriber has invented and builds to order, a FLAX MACHINE, which, attended by two hands, is guaranteed to dress from three hundred to four hundred and fifty pounds of flax per day. The saving in labor and tow, by comparison, is considered equivalent to the cost of dressing flax by the best common machinery, used in this country and Europe. The new machine is made with care, to secure strength and durability, and can be run at a speed which requires more than two hands to attend it. Unrooted flax straw can be dressed by it. It can be driven by horse power or otherwise; and, being portable, can be sent any distance. For the present, the price of the machine complete, is \$400. Those who wish to obtain it in season to begin operations next autumn, will do well to apply soon.

S. A. CLEMENS.
Springfield, Mass., March 9, 1853.—mf.

Suffolk Pigs.

OF pure blood, for sale by
B. V. FRENCH,
Braintree, Mass.

Premium Agricultural Works, Albany, Y. N.

THE subscribers, proprietors of the above Agricultural Works, are the sole manufacturers of Dederick's Patent Parallel Lever and Horizontal Portable Hay Press.

This press was illustrated in the 16th No. of the Country Gent., and the June number of the Cultivator. Since that time, some very essential and valuable improvements have been made. A new and improved capstan has been invented, by which the horse (without being removed from the sweep) operates the press, both in packing the bale, and drawing back the follower, thereby dispensing with the windlass for drawing back the follower by hand. The horizontal press, illustrated in the 14th No. of the Country Gent., and the May number of the Cultivator, and represented as "H. L. Emery's portable hay press," is the horizontal press as first invented by Mr. Dederick, and exhibited at the New-York State Fair, held at Utica in Sept. last, and was published by said Emery without authority or consent. The Horizontal Press, as since improved, and at present manufactured by us, is universally admired and approved. Its advantages, compared with the upright or vertical portable press, are too numerous to be specified in a limited notice. Descriptive circulars will be promptly sent upon application. We warrant these presses in all cases, to give satisfaction or to be returned. Orders solicited and promptly filled.

DEERING & DEDERICK,
Corners of Bleecker and Franklin sts., Albany.
July 21—w29—mtf.

Improved Portable Cider Mill and Press.

HICKOK'S Improved Portable Cider Mill and Press, received following premiums in 1852, viz.:—A Silver Medal at the Fair of the American Institute, New-York Diploma at the Franklin Institute, Philadelphia. First premiums at the State Fair at Utica, and at the Columbia and Rensselaer county Fairs, and a diploma at the Westchester County Fair.

Descriptive circulars sent free to all post-paid applications. See page 23 of this paper, for engraving, &c. Price \$10.

Manufactured by W. O. HICKOK,

Harrisburg, Pa.

Sold by LONGETT & GRIFFING, 25 Cliff-st., N. Y.
EMERY & CO., Albany.
DANA BROTHERS, Utica.
PROUTY & CHEW, Geneva.
HIGGINS & CALKINS, Castile, Wyoming County.
C. E. YOUNG, Main-st., Buffalo.
O. GREGORY, Binghamton.
CHARLES ASHLEY, Ogdensburg.
D. LANDRETH, Philadelphia.

July 14—w3m—m3t.

Just Published,

STOCKHARDT'S CHEMICAL FIELD LECTURES.—For Agriculturists. Edited, with notes, by James E. Teschmacher.

Opinion of Samuel L. Dana, M.D. L.L.D.

The great and striking feature of this little book is, that written by an eminently practical teacher for a class of farmers whose good opinion of the value of science to agriculture was to be won, their experience has been placed above scientific conjecture, and their practical knowledge has been made the point of scientific illustration. Hence the work is more simple and intelligible than any other chemico-agricultural work which has yet appeared.

Devoted chiefly to the practical consideration and money value of manures, its views of vegetable physiology are at once comprehensive, transparent as water, and illuminated by style so bewitchingly simple and concise, that the reader, familiar though he may be with the subject, feels that he is carried onward under the guidance of a master spirit, and as he passes the old landmarks, sees them shining with a new light.

The book has yet to be written whose chapters on artificial manures shall equal Stockhardt's Field Lectures on bone and guano, and certainly no work has yet appeared, which has shed a clearer or milder light on the intimate connection between science and agriculture.

In truth, the great recommendation of this work is, that it is adapted equally to a class of readers who have yet to learn their A B C in agricultural chemistry, and to that other class whose diffusive reading, here finds itself compressed not less neatly than usefully. With regard truly yours,

JOHN BARTLETT. S. L. DANA.
Just issued, the Sixth Thousand of Stockhardt's Principles of Chemistry.

FOR SALE—a few sets of Apparatus in a portable form, prepared in Germany, and designed for the student, with or without the aid of a teacher. JOHN BARTLETT,
March 24—12—1t—e.o.m3t. Cambridge.

Agricultural Implements.

STRAW AND STALK CUTTERS—of all patterns.
CORN MILLS—both of Iron and Burr Stone.

CORN AND COB CRUSHERS—of Beals', Nichols' and Sinclair's make.

ROAD SCRAPERS—of several patterns.

FANNING MILLS—of all the best makers.

SAUSAGE STUFFERS AND CUTTERS—of all patterns.

VEGETABLE OR ROOT CUTTERS—of approved kinds.

CORN SHELLERS—for hand and horse power.

VEGETABLE BOILERS—of Mot's and Bent's patterns.

GARDEN AND WHEEL BARROWS—of iron and wood.

HAY AND COTTON PRESSES—Bullock's patent.

BRICK MACHINES—of Hall's and other makers.

WAGONS AND CARTS.

PLOWS—of Prouty & Mears, Centre Draft, and Rich's Iron Beam PLOWS—Eagle, Massachusetts make, and Minor & Hortons.

For sale at the State Agricultural Warehouse, No. 25 Cliff Street, New-York.

Nov. 1—tf.

Albany Tile Works,

Corner Patroon and Knox Streets, Albany, N. Y.

DRAIN TILE of the following descriptions and prices, suitable for land drainage, always on hand, in large or small quantities, of the first quality, delivered at the Docks and Railroad Depots free of cartage.

Horse Shoe Tile.

4½ inch calibre, \$18 per 1000 feet.
3½ " " \$15 "
2½ " " \$12 "

Sole Tile or Pipe.

3 inches calibre, \$18 per 1000 feet.
2 " " \$12 "

Horse Shoe Hand Tile, 8 inches calibre, for drains around dwellings, at \$8 per 100 feet. Sole Tile, 4 inch calibre, for sink drains, at \$4 per 100 feet—9 and 6 inch square, polished face Floor Tile, less than one-fourth the cost of marble, for basement floors and cellar pavements—9 and 6 inch square Bakers' Tile, for oven bottoms. Orders from a distance will receive prompt attention

A. S. BABCOCK.

Albany, April 14, 1853—16—13t—e6m.

Super-phosphate of Lime.

IN bags and barrels, made by C. B. DeBurgh, a warranted pure and genuine article, for sale by

GEO. DAVENPORT,

No. 5 Commercial, corner of Chatham-st., Boston,

Agent for the manufacturer, with directions for use.

Also, for sale, Ground Bone, Bone Dust, Burnt Bone, Guano, and Grass Seeds of reliable quality.

April 7—14—11—mtf.

Poudrette!

THE LODI MANUFACTURING CO. have on hand a large quantity of newly made and very superior quality of Poudrette, which they will sell at retail at their usual prices, \$1.50 per bbl. for any quantity over seven bbls., delivered free of charge on board of vessel. Persons desirous of purchasing from 2 to 500 bbls. Poudrette for this fall's use, or to lay up for early spring demand, will find it to their advantage to communicate early with THE LODI MANUFACTURING CO., No. 74 Cortland-st., New-York.

July 28—w3m—m3t.

Manures.

PERUVIAN GUANO, 2½ to 3½ cents per pound.
BONE DUST, when taken in equal quantities, \$2.25 per barrel.

BONE SAWINGS, separately, \$2.50 per barrel.

PLASTER, \$1 to \$1.25 per barrel.

POTASH, 3½ to 4 cents per pound.

CHARCOAL, \$1 per barrel.

SULPHURIC ACID, 2½ to 3½ cents per pound.

SUPERPHOSPHATE OF LIME, 2½ cents per pound.

WOOD'S RENOVATING SALTS, one cent per pound.

For sale at the State Agricultural Warehouse, No. 25 Cliff-street, New-York. LONGETT & GRIFFING.

Feb. 1—etf.

Railway Horse Powers,

FOR one or two horses—Threshers, Separators and Cleaners—Combined Threshers and Separators, all of the most approved plans, for sale at the STATE AGRICULTURAL WAREHOUSE, No. 25 Cliff-st., New-York.

July 28—w2m—m3t.

United States Agricultural Warehouse and Seedstore

No. 197 Water street, near Fulton street, New-York.

MERCHANTS, Planters and Farmers, in want of AGRICULTURAL and HORTICULTURAL IMPLEMENTS or SEEDS, for shipping, plantation, farm or garden purposes, will please call and examine our extensive and superior assortment of goods in the above line, unsurpassed by any other house in the United States, for finish, material and workmanship, and of the most approved patterns; all of which we will sell on us good terms as any other house in this city.

We have among our assortment the far-famed and unequalled EAGLE D. & F. PLOWS, warranted to draw lighter and do as good work in sod or stubble ground, as any other Plow to be found in the United States.

We also have the highest premium Straw Cutters, Fan Mills, Grain Mills, Premium Stalk Cutters, Horse Powers, Threshers and Separators of different kinds; Ketchum's celebrated Mowing Machine, unsurpassed; Hussey's Reaping Machine—also, McCormick's Cotton Gins, Cotton Presses, Hay and Hide Presses, Brick Machines, Harrows of all kinds, Sugar Mills for plantation use, Sugar Mills for grocer's use, Hand Store Trucks of all kinds, Mule Carts, Horse Carts, Farm Wagons, Wheel Barrows, Coal and Canal Barrows. In fact we have everything for shipping or using on plantation, farm or garden.

JOHN MAYHER & CO.

N. B. Guano, Bone Dust, Poudrette, Superphosphate of Lime, and other fertilisers

Jan 1, 1853—m&w

Devon Bull Red Rover for Sale.

RED ROVER is a full blooded North Devon Bull, bred by Geo. Patterson of Maryland; was sired by his superior imported bull Eclipse. His dam was "Venus," an imported cow of Geo. Patterson's, sired by Lord Leicester's bull Anchensis. Red Rover was calved June 28th, 1844, and has taken the following premiums:

The 1st premium at Poughkeepsie, as the best bull calf
The 1st " at the American Institute the same year.
The 1st " as the best 1 yr. old, 2 yr. old, 3 yr. old.
The 1st " at the N. Y. State fair in 1847.
The 1st " at the Hartford Co show in 1848.

THOMAS GOULD.

Aurora, Cayuga Co., N. Y.

July 1—m3t.

Important to Breeders of Stock.

THE subscriber offers for sale, two thorough bred Short-Horn Durham bull-calves—one 20 months old, a beautiful roan color, splendid proportions, a descendant of the much celebrated "Belted Will," of England; the other about two months old—white, of unequalled symmetry and beauty, and is also a descendant of "Belted Will"—his dam was got by "Bellville," the champion of England, Scotland and Ireland, and was imported to this province in 1851, and the first of Mr. Hoppers' celebrated herd ever brought into Canada—Also, two other calves, of the same unequalled breeding, three weeks old. Satisfactory certificates of pedigree will be furnished. For further particulars, application may be made to RALPH WADE, Spring Cottage, July 7, 1853.—w1t—m2t. near Port Hope, Canada West.

Devon Cows,

HEIFERS, and Bull Calves—pure blood—for sale by Feb. 1—m1y. B. V. FRENCH, Braintree, Mass.

Suffolk Swine.

PIGS, Breeding Sows and Boars, of the purest blood and finest specimens. To be seen, one of the finest boars in the world.

GEO. W. WILSON,

July 28—w1t—m2t* Malden, Mass., 4 miles from Boston.



SUFFOLK
and
Essex Pigs,



PURE BRED, for sale by July 22—m3t

Fancy Lop-Eared Rabbits.

purely bred, can address June, 1853—w3t—m3t.

I HAVE now about ready for delivery, a few pairs of fine English Fancy Lop-eared Rabbits, from stock imported by me directly from London and Dublin. Gentlemen, or amateurs, desirous of obtaining fine young stock GEO. P. BURNHAM, Box 22, P. O., Boston, Mass.

Valuable Farm for Sale.

THE subscriber offers for sale four hundred and fifty acres of land, being a part of his homestead, and comprising two hundred acres of as desirable land as any in Addison county—lying on the main road four miles north of Vergennes on the border of Lake Champlain, and one mile from the Railroad Station. It is under good cultivation, and furnished with commodious buildings. The remaining 250 acres is wood land; a portion of it covered with a heavy growth of hemlock and other valuable timber, and the remainder with the best quality of wood for fuel. The property will be sold together or in parcels. Postpaid inquiries promptly responded to.

ROW'D T. ROBINSON,
Ferrisburgh, Addison co., Vt.

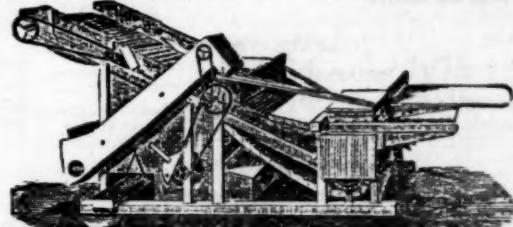
Aug. 1—tf.

A Virginia Farm For Sale.

PLEASANTLY situated in Fairfax county, 13 miles from Alexandria, 16 miles from Washington, and about 1½ miles from Lee station, on the Alexandria and Orange railroad, a farm of 218 acres, about one-half intervalle or bottom land, the residue a gentle swell of upland. It is admirably adapted to grazing, and is well watered with two small streams of never failing water, and is capable of producing excellent crops of corn, wheat, potatoes, grass, &c. The location is healthy, and the markets as good as any in this country. On the premises is a young and thrifty orchard of 125 apple trees, 25 peach trees, pear, cherry trees, &c. Also a timber lot of 20 acres, (hard-wood,) and 50 acres second growth pine, which will yield 40 cords per acre, worth \$2 per cord at the railroad, 1½ miles distant. There is a small dwelling house and other buildings on the farm. The fences are tolerable, 2000 new chestnut rails having been added to the fences within two years. Price \$10 per acre; one half in hand, the balance in two years. Persons desirous of examining the premises, will call upon ANSEL WHEDON, Agent, near Lee station. For further information, address

A. & O. WHEDON,
West Pawlet, Vt.

Agricultural Implement Manufactory,
Corner of Carolina and Third-streets, Buffalo, N. Y.



PITTS' PATENT SEPARATOR—IMPROVED DOUBLE PINION HORSE POWER—PITTS' CORN AND COB MILL, &c.

I HEREBY give notice, that since the extension of the Patent right on my machinery for Threshing and cleaning grain, I have removed to Buffalo, N. Y., where I have permanently located, and erected a large establishment for the future manufacture of the above machines.

The Separator has been enlarged, improved, and rendered more permanent and durable in all its parts—while the Horse Power, for strength, ease, durability, and cheapness of repair, is not surpassed by any in the United States. This Power is warranted to stand the full strength of eight horses, also to give as much effective or useful power when driven by one or two horses, as any other Horse Power, whether constructed on the endless chain or lever principle.

It was put on trial at the great exhibition of Horse Powers and Threshing Machines, at Geneva, in July last, 1852, where it received the New-York State Agricultural Society's first premium "for the best Horse Power for general purposes."

The Separator, at the same trial, also received the Society's first premium. My machines will thresh and clean from three to five hundred bushels of wheat per day, and other grain in proportion.

Two hundred of the above machines are for sale at the Agricultural Works of the subscriber, in this city, all warranted to be a better article than can be purchased at any other shop, and if they do not prove on trial to be so, I will take them off the hands of the purchasers, at the price they may pay me for them.

I further notify all persons, who are purchasing Horse Powers and Separators to be used in California or Oregon, that I will hold them accountable for any infringement of the rights secured to me by letters patent in the above machines, as I am manufacturing a Horse Power and Separator expressly designed for that section.

All orders for the above machines, hereafter, addressed to the subscriber, will receive prompt attention.

April 14—lame6t JOHN A. PITTS, Buffalo, N. Y.

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Fowls at Auction.

Large Sale of Imported Fowls.

S. M. PARKE, Auctioneer, will sell in front of Auction Room, No. 6 James street, Albany, on Tuesday, 13th of September, the entire stock of Imported Fowls belonging to a gentleman removing from this country. Comprising—
White, Buff, and Black Shanghai.
do do do Cochin China.
Black and Golden Top-Knots.
Superior Creoles and
Black Spanish Fowls.

—m—

Choice Fowls.

GENTLEMEN who may be desirous of procuring the best and largest China Fowls in this country, Cochin China, Black, Brown and Buff Dominique, White Shanghais, all from the best importations now known, can now be supplied by the subscriber. All orders promptly attended to. Address, post paid, GEORGE ANDERSON,
Aug. 4w&—m1t* 56 Schuyler st., Albany, N. Y.

Dorkings!

SPECKLED DORKINGS, for sale, at \$10 the half dozen. Any greater or less number at the same rate. JOHN R. PAGE.
Sennett, N. Y.—August 4—w&m1t*

Suffolk Pigs.

THE subscribers are prepared to receive orders for pure Suffolk Pigs, bred from stock imported in 1848 by the late William Stickney, also by the subscribers in Jan. last. Address, JOSIAH STICKNEY, Boston or Watertown, or ISAAC STICKNEY, Boston, Mass.
September 1—m6t.

Seed Wheat.

A LARGE assortment of the best varieties of Seed Wheat, among which are the Mediterranean, Hutchinson's and Soule's White Flint, for sale by GEO. H. BARR & CO., Sept. 1—m2t. 53 Cortlandt St., New-York.

Fall Exhibition of the New-York Hort. Society.

THE Society's Fall Exhibition will be held at Niblo's Garden, New-York city, on Tuesday, Wednesday and Thursday, September 20th, 21st, and 22d, 1853. The Committee would call attention to a very liberal list of awards; and to afford encouragement to those who live without the city, they will pay the freight on all articles sent from a distance. By order of the Committee of Arrangements.

33—5t.—m1t. PETER B. MEAD, Chairman.

New-York Agricultural Warehouse.

HORSE Powers, Threshers, Fan Mills, Smut Machines, Grain Drills, Hay Presses, Grain Mills, Corn and Cob Crushers, Cider Mills, and a large assortment of Plows and all kinds of Agricultural and Horticultural Implements.

Peruvian Guano, Super-phosphate of Lime, Bone Dust and other fertilizers of the most superior kinds.

I. L. ALLEN.

Aug. 18—w mt. 189 & 191 Water-st., New-York.

Superior Seed Wheat.

A LARGE assortment of the best varieties of improved Seed Wheat, among which are the Golden Australian, China or Troye, White Flint, Hutchinson's Improved, Soule and Mediterranean.

Seed Rye of the best winter variety; also a cheaper kind, suitable for late fall and early spring pastures.

Field and Garden Seeds of the various sorts.

R. L. ALLEN,

Aug. 18—w mt. 189 & 191 Water-st., New-York.

Horse Powers,

ON the Endless Chain Principle, from the best manufacturers—Emery's, Wheeler's, and White & Prentiss.

THRASHERS AND SEPARATORS.—Thrashers, Separators, and Winnowers combined.

The above are warranted to give satisfaction. For sale at the lowest cash prices, at the State Agricultural Warehouse.

LONGETT & GRIFFING,

Aug. 18—w8t—m2t 25 Cliff-street, New-York.

Horse Powers, Threshers, &c.

RAILWAY Powers of Wheeler's and other manufacture, for one and two horses.

THRESHERS—With and without Separators.

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